



**United Nations  
Environment  
Programme**

**Ninth meeting of the Conference of  
the Parties to the Vienna Convention  
for the Protection of the Ozone Layer**

**Twenty-Third Meeting of the Parties to  
the Montreal Protocol on Substances  
that Deplete the Ozone Layer**

**Bali, Indonesia, 21–25 November 2011**

**Report of the combined ninth meeting of the Conference of the  
Parties to the Vienna Convention on the Protection of the Ozone  
Layer and the Twenty-Third Meeting of the Parties to the  
Montreal Protocol on Substances that Deplete the Ozone Layer**

**Introduction**

1. The combined ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol was held at the Bali Nusa Dua Convention Centre in Nusa Dua, Bali, Indonesia, from 21 to 25 November 2011. It consisted of a preparatory segment, held from 21 to 23 November, and a high-level segment, held on 24 and 25 November. The meeting was opened at 10.20 a.m. on Monday, 21 November 2011.
2. The present report reflects the deliberations under the items included on the single agenda used for the combined meeting; any references to the current meeting should be understood to denote the combined meeting of the two bodies.

**Part one: preparatory segment**

**I. Opening of the preparatory segment**

3. The preparatory segment of the meeting began with welcoming remarks by a master of ceremonies, a performance of traditional Indonesian dance, an introductory address by Mr. Marco González, Executive Secretary of the Ozone Secretariat, and an opening statement by Mr. Balthasar Kambuaya, State Minister for the Environment of Indonesia.
4. In his statement, Mr. González welcomed the participants and thanked the Government of Indonesia for hosting the meeting. He drew attention to the historical achievements of the Montreal Protocol, recalling that the parties to the Protocol had, in 1990, agreed to accelerate the control of chlorofluorocarbons (CFCs), halons and carbon tetrachloride in a manner that shifted the fundamental strategy of the instrument from phase-down to phase-out of ozone-depleting substances, with the goal of total phase-out of controlled production and consumption by 2010. He then announced that over 95 per cent of parties had reported data for 2010, and all had reported full compliance with the phase-out of controlled uses of CFCs, halons and carbon tetrachloride. As a consequence, over 98 per cent of ozone-depleting substances controlled by the Montreal Protocol had been phased out, which represented a considerable achievement.

5. There was, however, no room for complacency. It was becoming more apparent that a synergistic approach was needed to respond to the complexities of the global environment, including the increasingly recognized interlinkages between ozone and climate change issues. It was therefore important to maintain commitment to phasing out ozone-depleting substances and to be vigilant in monitoring the global atmospheric environment. In that regard, efforts should be made to ensure that the appropriate programmes and monitoring tools were in place to maintain historical records of the levels of ozone-depleting substances in the stratosphere. In addition, he stressed that the phase-out of hydrochlorofluorocarbons (HCFCs) would present an opportunity to make the transition to more benign substances and energy-efficient technologies that would both protect the ozone layer and provide climate benefits, thus contributing to sustainable development. Continuing that process would require a robust replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol. Finally, he drew attention to other important issues on the agenda of the current meeting, including hydrofluorocarbons (HFCs), exemptions, the work of the assessment panels and the treatment of ozone-depleting substances used to service ships.

6. Mr. Kambuaya welcomed the participants to Bali, saying that his country had witnessed a defining moment in the history of climate change negotiations with the adoption of the Bali Road Map and Bali Action Plan at the thirteenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, in December 2007. He expressed the hope that the current meeting would result in significant measures to protect the ozone layer. Indonesia viewed the Montreal Protocol as a good example of how an international treaty could be implemented effectively and universally, thanks to the support and commitment of its signatory parties. He outlined the control measures that Indonesia had undertaken to fulfil its obligations under the protocol, noting that it had achieved a complete phase-out in advance of the stipulated deadline of 2010 and that the Executive Committee of the Multilateral Fund had approved the country's HCFC phase-out management plan.

7. He drew attention to the new challenges facing the Montreal Protocol, including how to deal with those substances that had a low ozone-depletion potential but a high global-warming potential. Such challenges meant that it was necessary to think and act in a comprehensive and holistic manner, as demonstrated by Indonesia's success in reducing greenhouse-gas emissions while maintaining high levels of economic growth. Indonesia recognized that the phase-out of HCFCs should be undertaken synergistically with other efforts to protect the environment for the benefit of present and future generations. He reported that as part of its effort to promote synergy and cooperation, Indonesia had developed for the consideration of the parties a declaration on the transition to low-global-warming-potential alternatives to ozone-depleting substances. In conclusion, he thanked all those involved in organizing the meeting and wished the participants fruitful and productive deliberations.

8. Following his statement, Mr. Kambuaya struck a ceremonial gong to mark the official opening of the meeting.

## **II. Organizational matters**

### **A. Attendance**

9. The combined ninth meeting of the Conference of the Parties to the Vienna Convention and Twenty-Third Meeting of the Parties to the Montreal Protocol was attended by representatives of the following parties to the two instruments: Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Belgium, Benin, Bhutan, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Cambodia, Canada, Central African Republic, China, Colombia, Congo, Cook Islands, Costa Rica, Côte d'Ivoire, Cuba, Czech Republic, Democratic Republic of the Congo, Denmark, Dominica, Dominican Republic, Egypt, Equatorial Guinea, Estonia, Ethiopia, European Union, Fiji, Finland, France, Gambia, Georgia, Germany, Grenada, Guinea, Guinea-Bissau, Holy See, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Lesotho, Lithuania, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Palau, Panama, Philippines, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Samoa, Sao Tome and Principe, Senegal, Seychelles, Singapore, Solomon Islands, South Africa, Sri Lanka, Suriname, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Thailand, the former Yugoslav Republic of Macedonia, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Uganda, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America,

Uruguay, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Yemen, Zambia, Zimbabwe.

10. A representative of South Sudan attended the meeting as an observer.

11. Representatives of the following United Nations bodies and specialized agencies also attended: Economic and Social Commission for Asia and the Pacific, Global Environment Facility, Secretariat of the United Nations Framework Convention on Climate Change, United Nations Development Programme, United Nations Environment Programme, United Nations Industrial Development Organization, World Bank.

12. Representatives of the following intergovernmental, non-governmental and industry bodies attended the meeting as observers: African Development Co. for Trade, Alliance for Responsible Atmospheric Policy, Asahi Glass Co. Ltd., Ausk International LLC, BASF, California Citrus Quality Council, California Strawberry Commission, Changshu 3F Fluorochemical Industry Co. Ltd., Chemtura Corporation, Children's Hospital, China Association of Fluorine and Silicone Industry, China Association of Organofluorine and Silicone Material Industry, China Fluoro Technology Co. Ltd., Crop Protection Coalition, CYDSA, Daikin Industries, Ltd., Danish Environmental Protection Agency, Dow AgroSciences LLC, DuPont International, Emergent Ventures India (EVI), Environmental Investigation Agency, Foam Supplies Inc., Free Trade Co., GIZ Proklima, Green Cooling Association, Greenpeace International, Gujarat Fluorochemicals Limited, HARMED, ICF International, Industrial Technology Research Institute, Institute for Governance and Sustainable Development, International Institute of Refrigeration, Japan Fluorocarbon Manufacturers Association, Jiangsu Kangtai Fluorine Chemical Co. Ltd., K-Global Corporation, Korea Specialty Chemical Industry, Kyoto University, M. De Hondt BVBA, Manitoba Ozone Protection Industry Association, MEBROM, MEBROM PTY Ltd., Myland Group, Natural Resources Defense Council, Navin Fluorine International Limited, NIFLON, Nybra Consulting, OSP Advantage System, Panasonic Corporation, Princeton University, PT. Grasse Arum Lestari, Refrigerants Australia, Shecco, Sinochem Lantian Co. Ltd., Smardt Inc., SRF Limited, Technical Education and Skills Development Authority, Teijin Aramid BV, TouchDown Consulting, Trans-Mond Environment Ltd, Yingpeng Chemical Co. Ltd., Zhejiang Chemical Industry Research Institute, Zhejiang Fluorescence Chemical Co. Ltd., Zhejiang Juhua Co. Ltd., Zhejiang Quhua Flour-Chemistry Co. Ltd., Zhejiang Sanmei Chemical Industry Co. Ltd., 3M Electronics.

## **B. Adoption of the agenda of the preparatory segment**

13. The following agenda for the preparatory segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Conv.9/1-UNEP/OzL.Pro.23/1:

1. Opening of the preparatory segment:
  - (a) Statement by representative(s) of the Government of Indonesia;
  - (b) Statement by representative(s) of the United Nations Environment Programme.
2. Organizational matters:
  - (a) Adoption of the agenda of the preparatory segment;
  - (b) Organization of work.
3. Combined Vienna Convention and Montreal Protocol issues:
  - (a) Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol;
  - (b) Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol.
4. Montreal Protocol issues:
  - (a) Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol:
    - (i) Supplemental report of the Technology and Economic Assessment Panel replenishment task force;
    - (ii) Extension of the fixed-exchange-rate mechanism;
  - (b) Issues related to exemptions from Article 2 of the Montreal Protocol:
    - (i) Nominations for 2012 and 2013 for essential-use exemptions;

- (ii) Essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation;
  - (iii) Nominations for 2012 and 2013 critical-use exemptions;
  - (iv) Quarantine and pre-shipment uses of methyl bromide;
  - (v) Global laboratory and analytical-use exemption;
  - (vi) Sustained mitigation of ozone-depleting-substance emissions from feedstock and process-agent uses;
  - (c) Environmentally sound disposal of ozone-depleting substances;
  - (d) Updating the nomination processes and recusal guidelines for the Technology and Economic Assessment Panel;
  - (e) Treatment of ozone-depleting substances used to service ships;
  - (f) Additional information on alternatives to ozone-depleting substances;
  - (g) Use of methyl bromide in Africa;
  - (h) Proposed amendments to the Montreal Protocol:
    - (i) Proposed amendment by Canada, Mexico and the United States of America;
    - (ii) Proposed amendment by the Federated States of Micronesia;
  - (i) Potential areas of focus for the assessment panels' 2014 quadrennial reports;
  - (j) Phase-out of HFC-23 by-product emissions;
  - (k) Status of Nepal relative to the Copenhagen Amendment to the Montreal Protocol;
  - (l) Consideration of membership of Montreal Protocol bodies for 2012:
    - (i) Members of the Implementation Committee;
    - (ii) Members of the Executive Committee of the Multilateral Fund;
    - (iii) Co-Chairs of the Open-ended Working Group;
    - (iv) Endorsement of a new co-chair of the Chemicals Technical Options Committee and a senior expert of the Technology and Economic Assessment Panel;
  - (m) Compliance and reporting issues considered by the Implementation Committee.
5. Vienna Convention issues:
- (a) Report of the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention;
  - (b) Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention.
6. Other matters.

14. During the adoption of the agenda for the preparatory segment the parties agreed to take up under agenda item 6, "Other matters", or under other items of the agenda the question of mobilizing funds from sources other than the Multilateral Fund to accelerate the phase-out of HCFCs; difficulties encountered by parties operating under paragraph 1 of Article 5 of the Montreal Protocol when phasing out methyl bromide; and a proposed Bali declaration on achieving the transition to low-global-warming-potential alternatives to ozone-depleting substances. The parties also agreed to take up the composition, functions and grades of the staff of the Montreal Protocol Secretariat under item 3 (a), "Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol"; and inflation adjustments for national institutional strengthening programmes under agenda item 4 (a), "Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol".

15. The discussion on the adoption of the agenda included deliberations on the merits of items 4 (h) and 4 (j) of the provisional agenda, "Proposed amendments to the Montreal Protocol" and

“Phase-out of HFC-23 by-product emissions”, respectively. One representative, supported by several others, said that HFCs were not ozone-depleting substances and that they therefore lay outside the scope of the Montreal Protocol and should not be on the agenda of meetings under the Protocol, especially given the failure to reach consensus on them at several earlier meetings. He said that discussion of HFC-related matters reduced the time available for discussion of the many items that were of direct relevance to the implementation of the Protocol and should be prioritized. One representative said that HFC-related matters had been discussed informally at earlier meetings, and that such an approach at the current meeting would allow the parties to concentrate on issues that lay within the mandate of the Protocol. Another representative argued that discussion of HFCs should be left to the United Nations Framework Convention on Climate Change.

16. Other representatives supported inclusion of HFC-related items on the agenda. Several noted that the proposed amendments to the Montreal Protocol had been submitted in accordance with the rules of procedure of the Montreal Protocol and the Vienna Convention for the Protection of the Ozone Layer and said that the matter was therefore properly on the agenda. One representative, supported by others, said that the parties differed in their priorities. Many said that the proposed amendment and the draft decision on HFC-23 by-product emissions were important priorities and that, as they always did for such important matters, the parties should find the time to discuss them; exchanging views helped to foster understanding, in keeping with the traditions of the Protocol. Another representative recalled that at the Twenty-Second Meeting of the Parties 91 parties had signed a declaration requesting the parties to give further consideration to HFCs. One representative pointed out that the parties to the Protocol had often discussed whether alternatives to ozone-depleting substances would have negative effects on the environment, other than their impact on the ozone layer, and had adopted decision XIX/6, which encouraged parties to take into account the impact of HCFC alternatives on the environment, including in particular the climate.

17. One representative said that the primary issue was one of principle: discussion under the Montreal Protocol of a substance that lay within the purview of the Kyoto Protocol to the United Nations Framework Convention on Climate Change could have negative legal, technical and policy implications. Another representative, however, said that it was equally a matter of principle that the problem of HFCs had arisen from actions taken under the Montreal Protocol and that parties therefore had a legal and moral obligation to rectify the issue.

18. Following the discussion, the Co-Chair said that as items 4 (h) and 4 (j) had been placed on the agenda in accordance with the rules of procedure, and there was no consensus to remove them, they would remain on the agenda.

#### **C. Officers**

19. The preparatory segment of the combined meeting was co-chaired by Ms. Gudi Alkemade (Netherlands) and Mr. Ndiaye Cheikh Sylla (Senegal), co-chairs of the Open-ended Working Group of the Parties to the Montreal Protocol.

#### **D. Organization of work**

20. The parties agreed to follow their customary procedure and to establish contact groups as necessary.

### **III. Combined Vienna Convention and Montreal Protocol issues**

#### **A. Financial reports and budgets of the trust funds for the Vienna Convention and the Montreal Protocol**

21. Introducing the item, the Co-Chair drew attention to the approved and proposed budgets set out in documents UNEP/OzL.Conv.9/4 and UNEP/OzL.Pro.23/4 and the financial reports set out in documents UNEP/OzL.Conv.9/4/Add.1 and UNEP/OzL.Pro.23/4/Add.1. He noted that it had been the practice of the parties at past meetings to establish a budget committee to review budget-related documents and prepare one or more draft decisions on budgetary matters. In accordance with that practice, the parties agreed to establish a budget committee, chaired by Mr. Alessandro Peru (Italy), to agree on budgets for the Vienna Convention and the Montreal Protocol trust funds and to prepare draft decisions on financial matters for the Convention and the Protocol.

22. Subsequently, the chair of the budget committee presented conference room papers containing consensus draft decisions on the financial report and budget of the trust fund for the Montreal Protocol and on the financial report and budget of the trust fund for the Vienna Convention.

23. During the discussion of budgetary matters, Mr. Michael Church, President of the Bureau of the Twenty-First Meeting of the Parties to the Montreal Protocol, reported that, in accordance with the wishes of the parties expressed at previous meetings, discussions had been held with the Executive Director of UNEP and the Secretary-General of the United Nations on extending the mandate of Mr. González as Executive Secretary of the Ozone Secretariat. As a result, the period of tenure of Mr. González as Executive Secretary had been extended to October 2013. He noted that as this date was not consistent with the term of extension that had been requested by the parties in decision XXII/21, the parties might wish to reconsider this issue at an appropriate time.

24. The parties took note of Mr. Church's statement and approved the draft financial and budgetary decisions for further consideration and adoption during the high-level segment.

## **B. Status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol**

25. Introducing the item, the Co-Chair recalled that at each meeting the parties reviewed the status of ratification of the Vienna Convention, the Montreal Protocol and the amendments to the Montreal Protocol. He drew attention to the draft decisions on the matter set out in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3.

26. The parties agreed that the draft decisions should be updated by the Secretariat for consideration and adoption during the high-level segment

## **IV. Montreal Protocol issues**

### **A. Replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol**

#### **1. Supplemental report of the Technology and Economic Assessment Panel replenishment task force**

27. Mr. Lambert Kuijpers, Co-Chair of the Technology and Economic Assessment Panel, Ms. Shiqiu Zhang, co-chair of the Panel's replenishment task force, and Mr. Daniel Colbourne, member of the task force, made a presentation on the task force's supplemental report on the replenishment of the Multilateral Fund for the period 2012–2014. A summary of the presentation, as submitted by the presenters and without formal editing, is set out in annex VI to the present report.

28. Following the presentation Mr. Kuijpers responded to several requests for clarification. Regarding swing plant funding, he said that although the supplemental report indicated that compensation for swing plants was not included, an addendum issued in November clarified that it was. He further specified that the option of full funding and the option of no funding for swing plant closures had both been considered in the May 2011 replenishment report.

29. Asked about funding stability, he explained that the replenishment task force had calculated consumption funding for stage I HCFC phase-out management plans and estimated funding for stage II plans and had then looked at how various options would contribute to a more stable funding profile. He said that chapter 6 of the supplemental report provided more details on options for ensuring more stable funding.

30. Regarding the cost effectiveness of phasing out ozone-depleting substances in the production sector, he said that while only two scenarios had been presented, more scenario tables could be prepared very quickly and the task force would be happy to do so upon request.

31. Responding to a query about cost estimates for converting plants from non-feedstock to feedstock production, he explained that the task force lacked the experience and technical information needed to be certain that all conversions could be achieved at a given cost level. Investigations with HCFC-22 manufacturers had revealed, however, that in principle such conversions should pose no problems.

32. He expressed agreement with one representative that there was significant uncertainty and lack of experience in estimating future production sector funding. He explained that, in its analysis, the task force had chosen not to postpone tranches of production sector funding to the second or third trienniums because consumption expenditure was already due to increase in later years, creating an imbalance that should not be exacerbated. He added that the task force had evaluated additional scenarios for funding requirements but had been unable to include them all in its presentation at the current meeting. They were, however, set out in the supplemental report.

33. One representative said that 2012–2014 was a key period for accelerating HCFC phase-out, that stable and efficient funding was therefore important, and that replenishment of the Multilateral Fund should be based on the practical needs of developing countries. He said that the current international economic situation made it even more important than usual to show political will and commitment and expressed the hope that developed countries understood the importance of production sector control measures and sustained funding sufficient to enable compliance. He also said that the conditions of developing countries should be taken fully into account in assessing their compliance.

34. Several representatives called attention to the variance in funding requirement estimates for the Multilateral Fund during the 2012–2014 triennium. The May 2011 report of the Technology and Economic Assessment Panel had estimated a total requirement of \$390–477 million, and the subsequent reassessment of the estimate was \$460–540 million. Representatives said that they would voice concerns about the increase in the estimated funding requirement during negotiations on the replenishment of the Multilateral Fund. One representative also said that the analysis in the supplemental report included too few scenarios and did not adequately explain large effects on funding estimates resulting from small differences in the underlying assumptions.

35. Many representatives of parties not operating under paragraph 1 of Article 5 of the Montreal Protocol said that, while the Multilateral Fund was the cornerstone of the Protocol's success, in the current global economic climate it was difficult to commit to substantial increases in funding. Some representatives said too that in times of financial difficulty it was important that the Multilateral Fund should be as cost effective as possible.

36. The representative of Japan observed that his country had been stricken by an earthquake, a tsunami and a nuclear disaster in early 2011 and that the response to those disasters was a priority for his Government, particularly given the global economic crisis. He further noted that there had been no change in the composition of countries operating under paragraph 1 of Article 5 of the Protocol despite rapid economic progress in some of those countries. Flexibility would be needed in negotiations on the replenishment, including consideration of voluntary contributions from parties operating under paragraph 1 of Article 5 and parties not so operating, or private funding.

37. One representative, speaking on behalf of a group of countries, expressed concern regarding the new replenishment figures contained in the supplemental report. He said that while there was limited scope for variations in estimated funding for the consumption sector, the options for the production sector provided in chapter 6 of the supplemental report created a sound basis for negotiation. He congratulated China and other parties operating under paragraph 1 of Article 5 for their recent agreement to use funds from the Multilateral Fund to reduce or eliminate HCFCs. He said that such an arrangement should be continued in the coming replenishment in accordance with decision XIX/6, in a manner that would enable all contributing countries to meet their obligations taking into account the substantial economic constraints that some of them were facing. He emphasized that as economically viable and technically feasible low-GWP alternatives existed for many applications, a transition to high-GWP alternatives should be avoided.

38. One representative of a non-governmental organization said that parties operating under paragraph 1 of Article 5 of the Protocol were strongly committed to shifting to alternatives with lower global-warming potential. Noting that the purpose of the Montreal Protocol was to protect the environment, he said that the use of substances harmful to the environment such as HFCs would undermine that purpose.

39. The parties agreed to establish a contact group, co-chaired by Ms. Donnalyn Charles (Saint Lucia) and Mr. Jozef Buys (Belgium), to consider the matter of replenishment further. All parties were invited to take part in the initial deliberations of the contact group.

40. Following initial sessions of the contact group, the Co-Chair reported that the contact group had agreed that its membership should be reduced in size, comprising the two co-chairs and the representatives of Argentina, Armenia, Australia, Brazil, Canada, China, Colombia, Czech Republic, France, Germany, India, Italy, Japan, Kuwait, Lebanon, Malaysia, Mexico, Nigeria, Sweden, Switzerland and the United States of America. He also said that at its initial meetings the contact group had addressed all the non-HCFC production elements of the replenishment.

41. Subsequently, the representative of Argentina formally introduced its draft decision on accounting for inflation in funding institutional strengthening projects. The proposal was supported by the representatives of Brazil, Colombia and Uruguay. The Meeting of the Parties agreed that further consideration of the draft decision would take place in the contact group on replenishment.

42. Following the work of the contact group the parties approved for consideration and adoption during the high-level segment a draft decision agreed by the contact group on the replenishment of the Multilateral Fund for the period 2012–2014.

43. The representative of India introduced a conference room paper containing a draft decision on guidelines for the funding of HCFC production facilities. He recalled that the nineteenth Meeting of the Parties had by its decision XIX/6 decided to accelerate the phase-out of production and consumption of HCFCs by 10 years. He said that in paragraph 5 of that decision the parties had agreed that the funding available through the Multilateral Fund in upcoming replenishments would be stable and sufficient to meet all agreed incremental costs to enable parties operating under paragraph 1 of Article 5 to comply with the accelerated phase-out schedule both for production and consumption. Furthermore, he said, decision XIX/6 was very clear on funding for second conversions in respect of both production and consumption and the parties had accordingly directed the Executive Committee of the Multilateral Fund to make necessary changes to the eligibility criteria related to post-1995 facilities and second conversions.

44. He said that the accelerated phase-out of production and consumption undertaken pursuant to decision XIX/6 had significant adverse impacts on countries operating under paragraph 1 of Article 5, as decision XIX/6 had significantly advanced the applicable control measures, bringing the baseline years forward from 2015 to 2009 and 2010 and the freeze date forward from 2016 to 2013. Corresponding changes in the step-wise phase-out of HCFCs would have major adverse implications for industry and the economy in his country. He said that although more than four years had passed, the Executive Committee of the Multilateral Fund had been unable to finalize policy guidelines for phasing out HCFC-22 production facilities, including HCFC-22 swing production plants. Such plants in countries operating under paragraph 1 of Article 5 were eligible for funding under decision XIX/6 and India had therefore prepared the draft decision for consideration at the current meeting.

45. During the ensuing discussion, several representatives opposed consideration of the draft decision. One representative, supported by others, said that the Executive Committee subgroup on the production sector had made significant progress in developing the guidelines for the production sector and should complete its work. In addition, the language of the draft decision under consideration differed from that in decision XIX/6 and was therefore not an appropriate basis for discussion. Nor was it clear under which item the meeting might consider the draft decision; it had not been put forward for consideration under other matters during the adoption of the agenda, and it was not relevant to the deliberations under item 4 (a) on replenishment.

46. Several representatives supported consideration of the draft decision. One representative, supported by others, said that the provision of funding for HCFC production facilities was very relevant to the discussion on replenishment of the Multilateral Fund and was of great importance for parties operating under paragraph 1 of Article 5 as they sought to comply with the control measures for HCFC production. Also, while the Executive Committee's subgroup on the production sector was considering that matter, the Meeting of the Parties had the authority, under paragraph 4 of Article 10 of the Montreal Protocol, to issue overall policy instructions to the Executive Committee. Another representative said that if the matter was not given due consideration at the current meeting then parties operating under paragraph 1 of Article 5 would be unable to comply with decision XIX/6.

47. The Co-Chair noted that the draft decision had not been raised during the adoption of the agenda and that there was no consensus to discuss it further. Accordingly he ruled that, as the parties were unlikely to achieve consensus on the draft decision, he would not consider any further discussion of the issue at the current meeting.

48. Following the Co-Chair's ruling, the representative of India said that in his view the parties had agreed that the draft decision submitted by his country would be discussed in the contact group on replenishment and objected to the fact that it had not been discussed there. He asked that the draft decision should be attached as annex to the present report; the parties having not expressed objection, the draft decision is set out in annex VII. He also said that if funding were not provided for closing HCFC swing production plants in countries operating under paragraph 1 of Article 5 of the Protocol then those countries would continue to produce HCFC-22 in accordance with the phase-out schedule in effect prior to the adoption of decision XIX/6, that is, based on a 2015 baseline, a freeze in 2016 at the 2015 baseline level and a complete production phase-out in 2040.

## **2. Extension of the fixed-exchange-rate mechanism**

49. Introducing the item, the Co-Chair noted that parties had used a fixed-exchange-rate mechanism to facilitate payments under the Multilateral Fund, resulting in a net increase in actual funds available. At its thirty-first meeting, the contact group established by the Open-ended Working



Group had recommended extending the use of the fixed-exchange-rate mechanism during the 2012–2014 triennium. A draft decision on the matter was contained in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3 (draft decision B).

50. One representative expressed strong support for extending the fixed-exchange-rate mechanism, following which the parties approved the draft decision for consideration and adoption during the high-level segment.

## **B. Issues related to exemptions from Article 2 of the Montreal Protocol**

### **1. Nominations for 2012 and 2013 for essential-use exemptions**

51. Mr. Ashley Woodcock, co-chair of the Medical Technical Options Committee, provided a presentation on the Committee's findings with regard to the nominations for 2012 and 2013 essential-use exemptions and updated the parties on the situations in China and the United States of America regarding the cessation of use of some types of CFC-free metered-dosed inhalers. A summary of the presentation, as submitted by the Committee and without formal editing, is set out in annex VI to the present report.

52. Several representatives expressed satisfaction that the number of requests for essential-use nominations had continued to decline. One representative, however, expressed regret that his country's request that the Medical Technical Options Committee should provide further information on CFC-based metered-dose inhalers intersessionally (as reflected in paragraph 89 of the report of the thirty-first meeting of the Open-ended Working Group) had not been fulfilled.

53. One representative said that his country had only been able to convert one facility to producing metered-dose inhalers using medical-grade alternatives to CFCs. While his country was committed to converting its remaining production facilities, he requested the approval of its essential-use nomination, saying that metered-dose inhalers were required to treat the large number of cases of asthma in his country. He said that his country was making progress in eliminating CFC propellants and expected to cease using them altogether by 2013.

54. Another representative said that his country had made administrative and technological progress in eliminating CFC propellants but that the continued high cost of alternatives meant that the use of CFCs was still necessary and that accordingly he would submit a draft decision on essential-use exemptions for consideration by the parties.

55. Other representatives said that alternatives to CFCs were available and that several other issues also needed to be addressed, such as the use of stockpiles. One representative said that the draft decision on essential-use nominations should address the issue of pharmaceutical grade CFCs and suggest a strategy to encourage parties to find alternatives to CFCs and develop regulations to ban their sale and use.

56. The Executive Secretary reported that on 3 August 2011 the Secretariat had received an urgent request from Mexico for an emergency use authorization for 6 tonnes of CFC-12 for metered-dose inhalers. He said that, in consultation with the Technology and Economic Assessment Panel, the Secretariat had authorized that emergency use and that Mexico had voluntarily decided to compensate for that consumption by destroying the same amount of CFC-11 from stockpiles.

57. Following the discussion it was agreed that interested parties would work together on a draft decision on essential-use exemption nominations for 2012.

58. Subsequently, the representative of China introduced a revised version of the draft decision on essential-use nominations for controlled substances for 2012, noting that the essential-use authorization for 2012 for chlorofluorocarbons for metered-dose inhalers for Bangladesh required finalization. Some representatives expressed an interest in further consultations on the draft decision.

59. Following those consultations the parties approved the draft decision for consideration and adoption during the high-level segment.

### **2. Essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation**

60. Introducing the item the Co-Chair recalled that at the thirty-first meeting of the Open-ended Working Group some concerns had been expressed about the Russian Federation's essential-use nomination for aerospace purposes and that parties had agreed to discuss the matter intersessionally.

61. At the current meeting one representative recalled that the Open-ended Working Group had discussed both the possible use of alternative solvents and the accelerated phase-out of CFC-113 by 2016 and that he would like to see that understanding reflected in the decision to be adopted on the

matter. The representative of the Russian Federation, however, said that there were currently no alternatives available that would enable his country to phase out solvents completely.

62. It was agreed that a number of interested representatives would discuss the matter informally.

63. Following those discussions the parties approved a draft decision for consideration and adoption during the high-level segment.

### 3. Nominations for 2012 and 2013 critical-use exemptions

64. Three of the four co-chairs of the Methyl Bromide Technical Options Committee, Mr. Mohamed Besri, Mr. Ian Porter, and Ms. Michelle Marcotte, provided a detailed presentation on the Committee's findings in respect of the critical-use nominations for 2012 and 2013. A summary of the presentation, as submitted by the presenters and without formal editing, is set out in annex VI to the present report.

65. During the ensuing discussion, the Co-Chair suggested that some parties might wish to pursue bilateral discussions with the Committee to discuss their own critical-use nominations or provide additional information.

66. In response to a question about alternatives to methyl bromide, the Committee co-chairs said that several alternatives were currently available. They also noted that decisions on using stockpiles of methyl bromide were taken by the parties and not by the Committee, and that it was not the role of the Committee to persuade parties to use alternatives to methyl bromide in quarantine and pre-shipment uses.

67. One representative said that by making available research on alternatives to methyl bromide the Committee would help those making requests for critical-use exemptions. He added that the rising use of methyl bromide for quarantine and pre-shipment purposes was a cause for concern and should be addressed through the Multilateral Fund.

68. Many representatives expressed satisfaction at the decline in critical-use nominations and methyl bromide use. Several representatives expressed concern, however, regarding the growing number of minority reports prepared by members of the Methyl Bromide Technical Options Committee with regard to critical-use nominations, the process by which the Committee generated its recommendations on such nominations and the inconsistent use of some figures in the current report. One representative asked for a detailed explanation of the components of the approval process and the indicators used by the Committee when assessing critical-use nominations. He also urged the Committee to work within its mandate. Another representative stressed that the Committee should seek to reach consensus in its deliberations. He also said that when reading the Committee's report he had sometimes found it difficult to reach the same conclusions as the Committee and requested that more information should be provided on how the Committee reached its conclusions. He also expressed concern at the metrics presented by the Panel for economic feasibility and what he described as the arbitrary nature of the suggested figures, noting that the parties had not endorsed the approach used by the Committee.

69. One representative recalled that his country had not requested an additional review of the recommendations of the committee for his country for 2011 but said that it disagreed with the conclusions of the minority report. Another representative expressed appreciation for the Committee's request to reconsider the number of Committee meetings held each year. He said that although two meetings a year had made sense in the past, lower methyl bromide use meant that it might not be necessary for the Committee to continue to meet so frequently. He noted that his country had cut methyl bromide use by 97 per cent from its 1991 baseline and that it had withdrawn its request for a critical-use exemption for using methyl bromide in research. Research needs would be met from existing stockpiles, which were being rapidly drawn down and might be exhausted by 2013. He added that the Committee's minority report for one use in his country had more accurately reflected the reality of methyl bromide use in his country than had the majority conclusion. Consequently he would be introducing a draft decision on that issue for the consideration of the parties.

70. Several representatives expressed interest in the draft decision on critical uses, although one representative said that he hoped that it would not lead to an increase in critical-use nominations. One representative of a non-governmental organization expressed concern at what he said was a tendency to seek critical-use exemptions for production of methyl bromide instead of drawing down stockpiles, and he urged parties to use up their stocks before seeking exemptions.

71. Following the discussions in plenary session and informal consultations the parties approved a draft decision on critical-use nominations for consideration and adoption during the high-level segment.

#### 4. Quarantine and pre-shipment uses of methyl bromide

72. Introducing the sub-item, the Co-Chair recalled that the European Union had presented a draft decision on quarantine and pre-shipment uses of methyl bromide at the thirty-first meeting of the Open-ended Working Group. Following discussion at that meeting the European Union had engaged in informal consultations and produced a revised draft decision, which was available to the parties as a conference room paper. Introducing the revised draft, the representative of the European Union said that it emphasized the crucial role of the International Plant Protection Convention in determining phytosanitary requirements in international trade and called for improved reporting and access to information on alternatives to methyl bromide.

73. Several representatives voiced general support for the draft decision, saying that it should be discussed in a contact group. Many said that there was a need for accurate data to provide a basis for controlling quarantine and pre-shipment uses of methyl bromide, suggesting that a good overview of quantities and uses would help to prevent proscribed uses.

74. Some representatives affirmed that measures should be taken, whenever possible, to avoid methyl bromide use both before shipment and on arrival, with some noting that they were often required to use methyl bromide by countries to whom they exported goods.

75. Several representatives also welcomed proposed measures for identifying alternatives to methyl bromide used for quarantine and pre-shipment purposes. One representative pointed out that the Technology and Economic Assessment Panel's report for 2010 had indicated that over 30 per cent of the methyl bromide used for quarantine and pre-shipment purposes could be rapidly replaced by alternatives. Another representative, however, said that the available alternatives were not very mature and that shifting to alternatives was a challenge for developing countries.

76. A few representatives said that any discussion of the draft decision should be deferred, stating that they were not yet in a position to provide detailed data on methyl bromide used for quarantine and pre-shipment purposes. Some suggested that reporting should be on a voluntary basis. One representative said that methyl bromide used for such purposes was already reported under Article 7 of the Montreal Protocol.

77. The parties agreed to establish a contact group, to be chaired by Ms. Alice Gausted (Norway), to discuss the matter and to consider the draft decision further.

78. Following the work of the contact group the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

#### 5. Global laboratory and analytical-use exemption

79. Introducing the item, the Co-Chair recalled that at the Open-ended Working Group's thirty-first meeting the Technology and Economic Assessment Panel had reported on alternatives to ozone-depleting substances available for laboratory and analytical uses. Following the deliberations at that meeting, China had put forward a draft decision (draft decision G in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3) that would allow parties operating under paragraph 1 of Article 5 of the Protocol to deviate from existing laboratory and analytical use bans in individual cases until 31 December 2014. Subsequently, several parties, supported by members of the Chemicals Technical Options Committee, had engaged in discussions on the substance of that draft decision.

80. Reporting on the status of those discussions, the representative of China said that the deliberations had been very fruitful and had culminated, at the current meeting, in an agreement between several parties on a revised draft decision. He expressed gratitude to those parties for their constructive approach and invited other interested countries to engage in further discussions.

81. Subsequently, the representative of China introduced a conference room paper containing a revised version of the draft decision. The parties approved the draft decision for further consideration and adoption during the high-level segment.

#### 6. Sustained mitigation of ozone-depleting-substance emissions from feedstock and process-agent uses

82. Introducing the sub-item, the Co-Chair recalled that the European Union had put forward a draft decision on sustained mitigation of ozone-depleting-substance emissions from feedstock and process-agent uses at the Open-ended Working Group's thirty-first meeting. After discussing the draft decision in a contact group, the Working Group had forwarded the draft decision for further consideration at the current meeting.

83. The representative of the European Union noted that there had been extensive intersessional consultations on the matter. On the basis of those discussions, the European Union had prepared two separate draft decisions, presented in conference room papers for consideration at the current meeting, one addressing process-agent uses and another on feedstock uses.

84. Several representatives expressed support for further discussions in a contact group, in particular to address the unexplained discrepancy between bottom-up and top-down estimates of carbon tetrachloride emissions. Several mentioned that new information had emerged during the inter-session consultations. One representative objected strongly to the discussion of feedstock uses in a contact group, arguing that such uses were not covered by the Montreal Protocol.

85. The parties agreed to establish a contact group, to be chaired by Mr. Blaise Horisberger (Switzerland). The contact group was mandated to consider process-agent uses first and then, if sufficient time remained, to consider feedstock uses, with particular emphasis on carbon tetrachloride emissions.

86. Following the work of the contact group the parties approved draft decisions on process-agent uses and on the discrepancy between bottom-up and top-down estimates of carbon tetrachloride emissions for consideration and adoption during the high-level segment.

### **C. Environmentally sound disposal of ozone-depleting substances**

87. Introducing the sub-item, the Co-Chair recalled that the Technology and Economic Assessment Panel had made a presentation at the thirty-first meeting of the Open-ended Working Group reviewing the Panel's work on destruction of ozone-depleting substances, pursuant to decision XXII/10.

88. The representative of Canada introduced a conference room paper containing a draft decision on adoption of new destruction technologies for ozone-depleting substances. It was timely and appropriate, he said, to take into account the recommendations of the task force established by the Panel in response to decision XXII/10 to update the list of destruction processes approved by the parties.

89. Subsequently, the representative of Canada presented a revised version of the draft decision, which the parties approved for further consideration during the high-level segment. In approving the draft decision the parties requested the Secretariat, prior to presenting the draft decision for adoption during the high-level segment, to complete the table in the annex to the draft decision by inserting the words "not determined" in the blank spaces in the table to indicate that the suitability of the related technologies had not been determined or approved for the substances in various annexes and groups of the Protocol.

### **D. Updating the nomination processes and recusal guidelines for the Technology and Economic Assessment Panel**

90. Introducing the sub-item, the Co-Chair recalled that by decision XXII/22 the parties had requested the Technology and Economic Assessment Panel to consider a number of issues related to the Panel's operation and that, in response to the Panel's report to the Open-ended Working Group at its thirty-first meeting, the representatives of Australia and the United States of America had introduced a draft decision (draft decision D in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3) that had been discussed by the contact group set up by the Working Group. Intersessional discussions had addressed organizational aspects of the Panel but a number of issues still needed to be resolved.

91. The parties agreed to establish a contact group to continue deliberating on the matter, co-chaired by Mr. Javier Camargo (Colombia) and Ms. Masami Fujimoto (Japan).

92. Following the work of the contact group the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

### **E. Treatment of ozone-depleting substances used to service ships**

93. Introducing the sub-item, the Co-Chair recalled that a draft decision on the issue had been put forward by Saint Lucia at the thirty-first meeting of the Open-ended Working Group and that a contact group had been established to consider the matter further. The resulting draft decision (draft decision K in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3) was before the parties for their consideration, and document UNEP/OzL.Pro.23/INF/3 contained additional information on ozone-depleting substances used to service ships that might assist the parties in coming to a conclusion on the issue.

94. The parties agreed to establish a contact group, co-chaired by Ms. Marissa Gowrie (Trinidad and Tobago) and Mr. Cornelius Rhein (European Union), to consider the issue further.

95. Following the work of the contact group the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

## **F. Additional information on alternatives to ozone-depleting substances**

96. Introducing the sub-item the Co-Chair recalled that it had been considered by a contact group at the thirty-first meeting of the Open-ended Working Group. The draft decision developed by that contact group (draft decision J in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3) was before the parties for their consideration.

97. The parties agreed to establish a contact group to consider the issue further. The Group was initially chaired by Mr. Leslie Smith (Grenada) and Mr. Mikkel Sorensen (Denmark); upon his departure, Mr. Sorensen was replaced by Ms. Jana Borská (Czech Republic).

98. Following the work of the contact group the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

## **G. Use of methyl bromide in Africa**

99. Introducing the sub-item, the Co-Chair recalled that at the thirty-first meeting of the Open-ended Working Group a number of parties had put forth a proposal that the Technology and Economic Assessment Panel should review methyl bromide consumption trends in Africa and make recommendations on possible phase-out activities. While a draft decision on key challenges facing methyl bromide phase-out in Africa (draft decision A in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3) was before the parties for consideration, the co-chair noted that a revised version of the proposal would be forthcoming.

100. Subsequently, the representative of Kenya introduced a revised version of the draft decision. He said that many parties operating under paragraph 1 of Article 5 of the Protocol, and particularly many of those in the African region, had made great strides in phasing out methyl bromide use in a number of applications and that parties were in compliance with the control measures for the substance under the Montreal Protocol. Nevertheless, while cost-effective alternatives to methyl bromide were available for several applications, significant difficulties were being encountered in some areas that threatened the sustainability of alternatives to methyl bromide and risked placing many parties in non-compliance. Those issues included increased pest resistance to alternative chemicals, non-availability of alternatives in the market, technical difficulties in converting to new formulations, increasing restrictions as even alternatives became subject to control measures outside the scope of the Protocol (European Union regulations, for example) and the high capital investment and running costs associated with some alternatives. The situation required urgent attention in view of the 2015 target for the phase-out of methyl bromide under the Montreal Protocol.

101. Another representative said that assistance was required by parties in Africa to overcome the technical and procedural difficulties in applying alternatives at the national level and in preparing possible nominations for critical-use exemptions for methyl bromide.

102. Following their discussions in plenary session and informal consultations among interested parties the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

## **H. Proposed amendments to the Montreal Protocol**

### **1. Proposed amendment by Canada, Mexico and the United States of America**

### **2. Proposed amendment by the Federated States of Micronesia**

103. The parties agreed to consider sub-items 4 (h) (i) and 4 (h) (ii) together.

104. The representative of the Federated States of Micronesia introduced a proposed amendment to the Montreal Protocol, relating to control of HFCs (UNEP/OzL.Pro.23/5). He told a traditional tale to illustrate the need for the parties to the Montreal Protocol to take action to protect the global community from further environmental degradation resulting from HFC production. He said that the people of the Federated States of Micronesia, a small island developing State, were not alone in facing immediate catastrophe due to global warming. Populations in many African States faced the same threat and globally there was a common interest in addressing climate change through all means possible. Despite the concerted efforts of the parties to the Montreal Protocol and the acclaim for their achievements, the ozone hole in the southern hemisphere had not shrunk in recent years and earlier in

2011 a large ozone hole had been discovered for the first time over the Arctic region. Saying that there was a significant difference between the cost of phase-out between Montreal Protocol processes and those of the Kyoto Protocol, he concluded by saying that instead of expressing regret for past losses it was important to find strength in what remained as a basis for planning the future.

105. The representatives of Canada, Mexico and the United States of America jointly presented their proposed amendment to the Montreal Protocol (UNEP/OzL.Pro.23/6) and drew attention to document UNEP/OzL.Pro.23/INF/5, prepared by the three parties, which addressed frequently asked questions relating to the proposed amendment.

106. Introducing the proposed amendment, the representative of the United States of America highlighted a recent UNEP report describing clear links between ozone-related issues and climate change. Noting that HFCs were being introduced almost exclusively as an alternative to ozone-depleting substances, he said that the parties must immediately address an environmental harm resulting directly from the implementation of the Protocol and that preventing harm would be more cost-effective than repairing the damage after it had materialized.

107. He said that parties had a responsibility under the Vienna Convention to manage the phase-out of ozone-depleting substances in a manner that minimized adverse effects on the environment and that the current forum was perfectly placed to discuss HFCs produced and consumed as alternatives to ozone-depleting substances. In outlining the substance of the proposed amendment, he said that it was important to send a clear signal to industry to develop and commercialize substances with low global-warming potential in both developed and developing countries. Substantial benefits might accrue from adopting the amendment, including a cumulative 98 gigatonne reduction in the production of HFCs by 2050. The proposed amendment did not alter or affect obligations under the United Nations Framework Convention on Climate Change but rather promoted harmonization and coherence of policies among multilateral environmental agreements. He also explained that since HFCs were the primary alternative to CFCs and HCFCs, which were subject to phase-out under the Montreal Protocol, the parties might agree, in accordance with paragraph 2 (b) of Article 2 of the Vienna Convention, to harmonize their policies in moving to other alternatives under the Montreal Protocol. Concluding, he noted that opposition to the proposed amendment had already been voiced on technical, economic and legal grounds. He said, however, that the way forward involved dialogue to find common ground, and he requested that a formal contact group should be established.

108. The representative of Canada added that the proposed amendment was timely, relevant and in line with the purpose of the Montreal Protocol and said that actions undertaken under the proposed amendment would complement the Kyoto Protocol. He said that there was a need to send an early signal to industry so that the market could adapt well in advance of regulatory change both by reducing production of HFCs and developing alternatives. He recalled that the parties to the Montreal Protocol had a long history of considering the impact of their actions and decisions on climate change, citing several decisions taken under the Protocol to that effect, specifically decisions X/16, XIV/10, XIX/6 and XX/8, along with decision 60/44 of the Executive Committee of the Multilateral Fund.

109. The representative of Mexico said that it was important for parties to the Montreal Protocol to make decisions based on scientific evidence and emphasized that his country had considered the evidence in deciding to support the proposed amendment and was acting on that basis alone. The financial mechanism under the Montreal Protocol had shown unparalleled success in reducing production and consumption of harmful gases and it would be appropriate to extend that process to HFCs. He affirmed that there was a moral and ethical basis for taking action based on clear scientific data and urged that parties should engage in cooperative dialogue about the proposed amendment.

110. The parties discussed at length whether the proposed amendments should be discussed in a formal contact group. Some representatives expressed support for doing so but other representatives maintained strong opposition to any formal consideration of the issue under the Montreal Protocol

111. There was agreement that in phasing out ozone-depleting substances it was preferable to adopt alternatives with low or zero global-warming potential rather than high global-warming potential. There was disagreement, however, on whether HFCs could be considered under the Montreal Protocol. Some representatives said that, because HFCs were not associated with ozone depletion, there was no legal basis for further discussion of the proposed amendments. Other representatives expressed support for further discussion of the amendments, noting that the Montreal Protocol and the Vienna Convention stipulated that protection of the ozone layer must be conducted with minimal effects on the environment and that the current rapid growth in HFC production was a direct result of actions undertaken under the Montreal Protocol.

112. Many representatives from parties vulnerable to the effects of climate change, particularly small island developing States and States in Africa, emphasized that the risks posed by and harm caused by climate change were already occurring and increasing, with disastrous effects for their populations. Several representatives said that it was contradictory to argue that actions taken under the Montreal Protocol might exacerbate climate change but that parties were barred from recognizing and responding to the consequences of those actions under the Montreal Protocol and must instead seek relief under a different international agreement having largely the same parties.

113. Some representatives said that both proposed amendments respected the principle of common but differentiated responsibilities, as they provided different timescales for phasing down HFCs for parties operating under paragraph 1 of Article 5 and those not so operating. One representative added that the Montreal Protocol had been one of the first multilateral environmental agreements to implement the principle, in particular in creating the Multilateral Fund and adopting worldwide implementation of ozone-depleting substance phase-out schedules. Another representative, however, said that the including HFCs in the Montreal Protocol would impose new obligations on all parties to the ozone regime that would not be consistent with the Kyoto Protocol, which only imposed the obligation of reducing HFCs on developed countries. In accordance with the principles of equity and common but differentiated responsibilities, developing countries, in contrast to developed countries, should deal with HFCs through voluntary, nationally appropriate actions supported by international financial, technological and capacity-building support. He urged parties to retain their focus on approaches that would be agreeable to all parties, instead of diverting efforts to questionable approaches such as the proposed amendments.. Proponents of the amendments suggested that such concerns could be resolved through dialogue in a formal contact group.

114. Some representatives said that the Montreal Protocol provided the infrastructure for addressing the production and consumption of HFCs, particularly through the Multilateral Fund, the OzonAction information clearing-house and other technical assistance mechanisms. Those representatives argued that the Montreal Protocol therefore provided a proper and effective framework for considerations of HFCs. Other representatives, however, said that the acknowledged success of the Montreal Protocol was grounded in its clear focus on ozone depletion. That success might be put at risk if its focus were diluted by encompassing other environmental issues. They said that the Framework Convention on Climate Change and its Kyoto Protocol were the appropriate multilateral environmental agreements for considering greenhouse gases such as HFCs. Some representatives further suggested that the Multilateral Fund could provide incentives for countries operating under paragraph 1 of Article 5 to use alternatives with low global-warming potential but that the Montreal Protocol could go no further in addressing HFCs in the absence of a request from the Framework Convention on Climate Change.

115. In response, representatives supporting establishment of a formal contact group to discuss the issues further noted that the priorities of the Framework Convention on Climate Change and the Kyoto Protocol were much broader in their overall scope, that negotiations under those agreements were much more complex, and that robust efforts to introduce consideration of HFCs in that context had so far failed. Moreover, those agreements addressed emissions but not consumption and production of greenhouse gases, including HFCs. They argued that the Montreal Protocol was therefore better positioned to examine consumption and production of HFCs, which had been promoted under its aegis. One representative also said that he supported a formal contact group but if one could not be created would also support informal negotiations to help advance the discussion of the amendments.

116. One representative said that it was not premature to consider HFCs or even timely to do so. Rather, parties were already too late in taking up the issue and time spent debating whether to have a fuller dialogue would be better used in a constructive discussion of controlling the effects of HFCs. Another representative said that there had been very successful collaboration between the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants. He suggested that a joint committee of the Montreal Protocol, the Framework Convention on Climate Change and the Convention on Long-Range Transboundary Air Pollution should be convened to identify how a synergies process might be applied to controlling HFCs under the ozone, climate change and air pollution regimes. Furthermore, the parties to the Vienna Convention should invite the parties to the other two conventions to consider implementing enhanced measures to study, monitor and report on HFCs.

117. Two representatives of non-governmental organizations expressed support for establishing a formal contact group. One noted that States arguing for consideration of the issues under the auspices of other multilateral environmental agreements were also blocking their consideration under those agreements. Another observed that the secretariats of those agreements had said that the earliest date

that HFCs could be considered under them would be 2016 and that no provisions would enter into force until 2020, by which time HFC production might have tripled. Accordingly, the Montreal Protocol provided a more responsive structure for discussion and action to reduce the harmful effects of HFCs. In addition, progress should not be held back by States seeking to protect domestic industry through inaction at an international forum.

118. On the other hand, the representative of an industry group from a developing country said that it would be too much of a challenge for industry in his country to reduce HFCs, and he suggested that additional alternatives were required before the issue could be discussed further.

119. In summarizing the discussion, the Chair noted that proper procedure had been followed by the parties proposing the amendments to the Protocol but that the parties had nevertheless failed to reach consensus on establishing a formal contact group to consider the proposed amendments. Indicating that it was necessary to move on to other items on the agenda, she therefore declared that the parties would not discuss the proposed amendments further at the current meeting either in plenary session or in a contact group. She noted, however, that the important issue of alternatives to HFCs could be discussed in the contact group discussing alternatives to ozone-depleting substances.

## **I. Potential areas of focus for the assessment panels' 2014 quadrennial reports**

120. Introducing the sub-item, the Co-Chair recalled that at its thirty-first meeting the Open-ended Working Group had requested the Secretariat to prepare a document consolidating the suggestions of the assessment panels on possible guidance that the parties might wish to give the panels regarding the preparation of their 2014 quadrennial assessment. Initial ideas on the matter were contained in document UNEP/OzL.Pro.23/10.

121. Some representatives expressed an interest in elaborating on those ideas at the current meeting. The representative of the European Union subsequently introduced a conference room paper containing a draft decision on potential focus areas for the 2014 quadrennial reports of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel. He summarized the main focal areas proposed for the reports, which, under the proposed schedule, would all be finalized by 31 December 2014. Several representatives expressed an interest in discussing the matter further.

122. Following deliberations among interested parties, the representative of the European Union presented a revised version of the draft decision. The parties approved the revised draft decision with small modifications for further consideration and adoption during the high-level segment.

## **J. Phase-out of HFC-23 by-product emissions**

123. The representative of the United States of America introduced a draft decision on phase-out of HFC-23 by-product emissions (draft decision C in document UNEP/OzL.Conv.9/3-UNEP/OzL.Pro.23/3). She said that the draft decision was intended to deal with HFC-23 emitted as a by-product of the production of HCFC-22.

124. One representative, supported by others, said that HFC-23 was not an ozone-depleting substance, that it came under the purview of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and that it was therefore not appropriate for consideration by the Meeting of the Parties. Some representatives said that the matter fell within the discussions that had already taken place on amendments to the Montreal Protocol and had therefore been disposed of and should not be discussed further, while others said that it was a distinct matter properly on the agenda. Furthermore, they noted that it had not been included in the earlier discussion on the HFC amendments and said that, as a result, it had to be considered separately. Finally, they said that the issue was directly related to HCFC-22 production, a matter directly within the purview of the Montreal Protocol.

125. The Co-Chair ruled that, as the parties were unlikely to achieve consensus on it, the draft decision would not be considered further at the current meeting.

## **K. Status of Nepal relative to the Copenhagen Amendment to the Montreal Protocol**

126. Introducing the item, the Co-Chair said that the Government of Nepal had submitted a request to have the issue of its compliance with the Copenhagen Amendment reviewed by the parties in the light of paragraphs 8 and 9 of Article 4 of the Montreal Protocol, which allowed a State to avoid the application of trade sanctions under the Protocol and its amendments if it could demonstrate that it was in full compliance with their provisions. The matter had been discussed at the thirty-first meeting of the Open-ended Working Group; at the recent sixty-fifth meeting of the Executive Committee of the



Multilateral Fund for the Implementation of the Montreal Protocol, at which the Committee had decided not to fund Nepal's HCFC phase-out management pending specific actions by that Party; and at the recent forty-seventh meeting of the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol.

127. The representative of Nepal said that the control of ozone-depleting substances was a high priority for the country and that all requirements of the Copenhagen Amendment with regard to control of HCFCs had been addressed by national regulations, through which annual consumption of HCFCs had been capped at 23 tonnes since 2001. Nepal had fulfilled all its obligations under the Protocol and had satisfied all reporting requirements. Consideration of Nepal as a party in full compliance with the HCFC control provisions pursuant to paragraphs 8 and 9 of Article 4 of the Protocol would help the country to move forward in implementing its HCFC phase-out management plan.

128. In the ensuing discussion, several representatives commended Nepal for the efforts it had made to control ozone-depleting substances and to move towards ratifying the Copenhagen Amendment. Mr. Ghazi Al Odat (Jordan), Vice-President, Rapporteur and previous President of the Implementation Committee, who had presided over the Committee's forty-seventh meeting in the absence of the current president, Ms. Elizabeth Munzert (Germany), said that in a recommendation agreed at its forty-seventh meeting, the Committee had advised Nepal to take note of decision XX/9. That decision clarified that the term "State not party to this Protocol" in Article 4, paragraph 9, did not apply to parties operating under paragraph 1 of Article 5 of the Protocol until 1 January 2013, effectively deferring the application of trade sanctions to Nepal, as such a party, until that date.

129. The parties took note of the current status of Nepal with regard to the Copenhagen Amendment, taking into account the recent decision of the Executive Committee and the recommendation of the Implementation Committee.

#### **L. Consideration of membership of Montreal Protocol bodies for 2012**

130. Introducing the item, the Co-Chair requested the regional groups to submit nominations to the Secretariat for several positions in Montreal Protocol bodies for 2012.

131. The parties subsequently agreed on the membership of the Implementation Committee and the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol and on co-chairs of the Open-ended Working Group. They also endorsed a new co-chair for the Chemicals Technical Options Committee and a senior expert of the Technology and Economic Assessment Panel.

132. The parties approved draft decisions reflecting that agreement for further consideration and adoption during the high-level segment.

#### **M. Compliance and reporting issues considered by the Implementation Committee**

133. In the absence of Ms. Munzert Mr. Odat reported on the work of the Committee's forty-sixth and forty-seventh meetings, which had taken place on 7 and 8 August 2011 and 18 and 19 November 2011 respectively. The full report of the forty sixth meeting was available, while that of the forty seventh meeting would be made available on the Ozone Secretariat's website.

134. He said that the Committee was pleased with the excellent progress by parties in meeting their data reporting and phase-out obligations under the Protocol. The draft decisions of the Committee were contained in a conference room paper summarizing the Committee's work at its forty-seventh meeting. That work had been immensely assisted by the representatives of the Multilateral Fund and its implementing agencies, including the Chair of the Fund's Executive Committee, and the Ozone Secretariat.

135. He then outlined the ten draft decisions approved by the Committee for consideration by the Meeting of the Parties. The first, on data reporting, listed seven parties that had yet to report ozone-depleting substance consumption and production data for 2010 in accordance with Article 7 of the Protocol. Those seven parties were Bolivia (Plurinational State of), Libya, Liechtenstein, Nauru, New Zealand, Peru and Yemen. Those seven parties were the only ones that had not yet reported their data and the rate of reporting was therefore high, with 189 parties having submitted their 2010 data. He also said that 92 parties had reported data for 2010 by 30 June 2010 in accordance with decision XV/15 and that such early submission of data was exceptionally helpful to the Committee's work. It was extremely encouraging that except for the seven parties all parties had complied with their data reporting obligations under the Protocol for all years from 1991 to 2010.

136. Turning to the reported data he observed that all parties operating under paragraph 1 of Article 5 that had reported data had already succeeded in phasing out the controlled uses of CFCs (except for those with approved exemptions for essential uses), halons and carbon tetrachloride and had therefore complied with the phase-out deadline of 1 January 2010. That, he said, meant that there was a high degree of confidence that the phase-out targets for methyl chloroform, methyl bromide and HCFCs would be successfully attained during the next two decades.

137. Three of the draft decisions pertained to the compliance status of particular parties: the draft decision on Libya recorded that party's non-compliance with its phase-out obligations for halons; the draft decision on Iraq addressed that party's compliance in the light of its security situation and political and economic difficulties; and the draft decision on Yemen concerned the fact that Yemen had not yet reported its HCFC data for the year 2009.

138. Two other draft decisions, on the European Union and the Russian Federation, recorded the fact that those parties had fallen into non-compliance because they were engaged in trade of HCFCs with Kazakhstan, a non-party to the Copenhagen and Beijing Amendments to the Protocol at the time that the trade had taken place. Kazakhstan had become a party to the Copenhagen Amendment on 26 June 2011 but was not yet a party to the Beijing Amendment.

139. A further two draft decisions dealt with requests for the revision of HCFC baseline data, while another dealt with the number of decimal places used by the Secretariat when presenting and analysing HCFC data for compliance.

140. The last draft decision addressed parties that had established systems for licensing the import and export of ozone-depleting substances. Of the 185 parties that had ratified the Montreal Amendment, only three had yet to establish such systems, while a further ten that had not ratified the Amendment had nevertheless established them. According to the reported data, 174 parties and eight non-parties had reported on their licensing systems, and the draft decision encouraged both parties and non-parties to act on that issue as necessary.

141. In conclusion, he thanked his fellow Committee members on the President's behalf for their hard work, support and dedication in helping him to carry out his duties.

142. In the ensuing discussion one representative said that he was concerned by the suggestion that the Secretariat should use two decimal places when analysing and presenting data. He recalled that data was reported in ODP-tonnes by the Secretariat and not the metric tonnes used by the parties and said that even in cases of little consumption of ozone-depleting substances the use of two decimal places could place parties in non-compliance.

143. Following Mr. Odat's presentation and the ensuing discussion the parties approved the draft decisions submitted by the Committee for further consideration and adoption during the high-level segment.

## **V. Vienna Convention issues**

### **A. Report of the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention**

### **B. Status of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention**

144. The parties considered items 5 (a) and (b) together.

145. Mr. Michael Kurylo (United States of America), chair of the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention, gave a presentation on the work of the eighth meeting, held in Geneva from 2 to 4 May 2011. A summary of his presentation, as submitted by Mr. Kurylo without formal editing, is set out in annex VIII to the present report.

146. The representative of the Secretariat then gave a presentation outlining the history of the General Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention, including its inception in 2003, its extension to 2015 and the institutional arrangements agreed between the Secretariat and the World Meteorological Organization in respect of its operation. She also detailed the administrative activities of the Secretariat under the Trust Fund, including the annual dispatch of invitations for contributions, and provided information on contributions and expenditures. As of 13 July 2011, \$259,054 had been received in the Trust Fund from the Czech Republic, Estonia, Finland, Kazakhstan, South Africa, Spain, Switzerland and the

United Kingdom of Great Britain and Northern Ireland. She also said that in kind contributions had also been received in conjunction with activities undertaken under the Trust Fund.

147. She said that four activities had taken place: a Dobson inter-calibration exercise in Egypt, in March 2004; a Brewer calibration in Nepal and Indonesia, in September 2006; an inter-calibration exercise in South Africa for all African Dobson instruments, in October 2009; and a Dobson data quality workshop in the Czech Republic, in February 2011. Planned activities included a Brewer calibration and associated training for several stations worldwide during 2012 and 2013 and an inter-comparison exercise involving all African Dobson instruments in October 2013. Currently \$103,454 remained in the Trust Fund and the limited resources available had prevented consideration of the national proposals submitted by six countries.

148. Responding to a question, Mr. Kurylo said that in many cases green-house gases and ozone-depleting substance were being measured together. Asking the Ozone Research Managers to measure greenhouse gases therefore did not duplicate work under the Framework Convention on Climate Change as an understanding of how all atmospheric gases functioned was necessary to an understanding of how the atmosphere functioned. As an example, he said that while sulfur hexafluoride was a greenhouse gas monitoring it could reveal a great deal about atmospheric circulation, which was also of value in understanding the behaviour of ozone-depleting substances.

149. Mr. W.L. Sumathipala (Sri Lanka), on behalf of the President of the Bureau of the eighth meeting of the Conference of the Parties to the Vienna Convention, Mr. Anura Priyadarshana Yapa, subsequently submitted two draft decisions on behalf of the Bureaux of the eighth meeting and of the Twenty-Second Meeting of the Parties to the Montreal Protocol. One concerned the recommendations of the Ozone Research Managers and the other related to the Trust Fund.

150. Several members requested more information on monitoring activities taking place in both the southern and northern hemispheres. Some expressed concern at the monitoring of green-house gases, which were said to be within the mandate of the United Nations Framework Convention on Climate Change. Several members asked for more time to consider both draft decisions and it was suggested that it might be possible to merge the texts into a single draft decision.

151. The Co-Chair asked interested parties to engage in informal consultations with the representative of Sri Lanka to revise the text to produce a single draft decision.

152. Following those consultations the parties approved a draft decision on the matter for consideration and adoption during the high-level segment.

## **VI. Other matters**

### **A. Mobilizing financing from sources other than the Multilateral Fund**

153. The representative of Burkina Faso introduced a draft recommendation on mobilizing financing from sources other than the Multilateral Fund for the accelerated phase-out of HCFCs in Africa.

154. Several members requested more time to review the draft decision. The Co-Chair requested interested parties to engage in informal consultations with the representative of Burkina Faso to revise the draft recommendation. Subsequently, the representative of Burkina Faso said that, following discussion at a meeting of the African group, the draft decision would be withdrawn to allow further discussion of the matter at the regional level.

### **B. Bali declaration on achieving the transition to low-GWP alternatives to HFCs**

155. As had been indicated during the opening of the current meeting the representative of Indonesia introduced a declaration on achieving the transition to low-GWP alternatives to HFCs. He then read the declaration, which is set out in annex IX to the present report as submitted and without formal editing, and invited other parties to sign it.

156. One representative recalled that at the Twenty-Second Meeting of the Parties in Bangkok, 91 countries had signed a declaration on the global transition away from HCFCs and HFCs. Since that meeting the total number of signatories had risen to 108, with the addition of Belarus, Côte d'Ivoire, Equatorial Guinea, Grenada, Guinea, Guinea-Bissau, Kenya, Malawi, Maldives, Morocco, Seychelles, Solomon Islands, Saint Vincent and the Grenadines, Swaziland, Trinidad and Tobago, Yemen and Zambia. She added that the current meeting marked the closure of the Bangkok declaration to additional signatories and suggested that parties wishing to add their names to it should sign the Bali declaration instead.

157. The representative of Indonesia thanked all representatives for their support for the Bali Declaration and announced that the Declaration was open for signature and would remain so until the Twenty-Fourth Meeting of the Parties.

## Part two: High-level segment

### I. Opening of the high-level segment

158. The high-level segment of the Twenty-Third Meeting of the Parties was opened at 5.20 p.m. on Wednesday, 23 November 2011, with an opening ceremony facilitated by a master of ceremonies.

159. Opening statements were delivered by Mr. Anak Agung Alit Sastrawan, representing the Governor of Bali; Mr. Marco González, Executive Secretary of the Ozone Secretariat; Mr. Balthasar Kambuaya, State Minister for the Environment, Indonesia; Mr. Priyadharshana Yapa; and Ms. Deborah Owens (United Kingdom of Great Britain and Northern Ireland), President of the Twenty-Second Meeting of the Parties to the Montreal Protocol.<sup>1</sup>

160. Mr. Sastrawan officially welcomed the representatives on behalf of the Governor of Bali, expressing his hope that the island's beauty would inspire solutions to the environmental challenges under discussion. He noted that population growth and tourism were putting pressure on Bali's natural environment; pollution and emission of ozone-depleting substances were high and rising, in part due to lack of awareness. He outlined the strategy adopted at all levels of the Government and the private sector to address these environmental issues over the long term, which was viewed as crucial for preserving the island's way of life. He concluded by expressing the hope that the representatives present would arrive at effective recommendations for controlling ozone-depleting substances.

161. Mr. González thanked the people and Government of Bali, who, he said, were living the ideal of sustainable development, a concept that had gained global prominence in the past 30 years. He suggested that as the Protocol approached its twenty-fifth year it should be viewed through the lens of sustainable development. Doing so revealed that key principles now recognized as cornerstones of sustainable development had been implemented consistently under the Protocol. They included the precautionary principle, according to which the international community had taken action in advance of hard evidence of ozone layer destruction; the principle of common but differentiated responsibilities, whereby developed countries provided both financial and technical support to enable developing countries to participate fully; and the "start and strengthen" approach that began with small steps and later strengthened the Protocol through amendments based on scientific, technological and economic assessments. He described the benefits of Protocol implementation, which included the carbon emissions avoided by phasing out ozone-depleting substances, the modernization of entire sectors and the achievement of substantial health benefits. Finally, he cautioned that challenges remained, particularly HCFC phase-out over the next four years, and he urged representatives to approach replenishment in a spirit of understanding and compromise.

162. Mr. Kambuaya welcomed the representatives to Bali and expressed his Government's commitment to eliminating ozone-depleting substances and addressing climate change in a synergistic manner. He identified certain key priorities for a global solution, namely, that phasing out ozone-depleting substances required technical and financial assistance; that an innovative strategy must address both the ozone layer and increasing atmospheric greenhouse gas concentrations; and that global political will and international action were necessary to implement the Montreal Protocol effectively. In closing, he called on representatives to adopt a Bali Declaration addressing a transition to low-global-warming-potential alternatives to ozone-depleting substances, and he expressed his hopes for a successful outcome to the meeting.

163. Mr. Priyadharshana Yapa welcomed the participants and said that since the last meeting of the Conference of the Parties several important implementation activities had taken place. The Ozone Research Managers, at their meeting in Geneva in May 2011, had reviewed national and international research and monitoring programmes and had made several recommendations on areas needing further research, support and resources to enable understanding of ozone recovery and the interrelationship between ozone and climate variability and human and biological vulnerability to increased ultraviolet radiation and other stress factors. The Bureau had held two meetings to review implementation of the decisions of the eighth meeting of the Conference of the Parties, during which it had agreed on the need for increased funding for research. He added that successful implementation of the Vienna Convention over the past twenty-six years had demonstrated the cooperative spirit of all parties in

<sup>1</sup> Ms. Owens replaced her fellow national Mr. Steven Reeves, who was elected President at the Twenty-Second Meeting of the Parties but was unable to complete his term.

addressing ozone depletion. Challenges persisted, however, some of which were closely linked to items on the agenda of the current meeting. Concluding, he said that it had been an honour for Sri Lanka to serve as President of the Bureau and he thanked his colleagues in the Bureau for their cooperation and support over the past three years.

164. Ms. Owens welcomed the representatives and expressed her gratitude for the trust invested in her during her tenure. She reported that the Bureau had met twice in the past year and was satisfied with the implementation of the decisions of the Twenty-Second Meeting of the Parties. Recalling that the Montreal Protocol's success was based on cooperation among the parties, she expressed her hope for a continued focus on agreement by consensus, noting that there were many challenges on the agenda of the current meeting, particularly the proposal for replenishing the Multilateral Fund. Calling attention to the plan for parties operating under paragraph 1 of Article 5 of the Protocol to implement their first control measure on HCFC phase-out by freezing production and consumption in the near future, she expressed confidence that a firm agreement on replenishment would send a positive signal to those parties regarding their compliance obligations. She concluded by thanking her colleagues in the Bureau, the Ozone Secretariat and all parties for their preparations for the current meeting.

165. Following those opening statements, the Executive Secretary presented the representatives of the Government of Indonesia with an award in recognition of the Government's outstanding efforts and achievements in protecting the ozone layer.

166. The representatives then enjoyed a cultural event, during which they learned to play the *angklung*, a traditional Indonesian musical instrument that each representative had received as a gift from the Government of Indonesia.

## II. Organizational matters

### A. Election of officers of the ninth meeting of the Conference of the Parties to the Vienna Convention

167. At the opening session of the high-level segment of the combined meeting, in accordance with paragraph 1 of rule 21 of the rules of procedure, the following officers were elected, by acclamation, to the Bureau of the ninth meeting of the Conference of the Parties to the Vienna Convention:

President:	Mr. Mikheil Tushishvili	Georgia (Eastern European States)
Vice-Presidents:	Mr. Alain Wilmart	Belgium (Western Europe and other States)
	Ms. Marissa Gowrie	Trinidad and Tobago (Latin American and Caribbean States)
	Mr. Ezzat Lewis Hannalla Agaiby	Egypt (African States)
Rapporteur:	Mr. Arief Yuwono	Indonesia (Asian and Pacific States)

### B. Election of officers of the Twenty-Third Meeting of the Parties to the Montreal Protocol

168. At the opening session of the high-level segment of the combined meeting, in accordance with paragraph 1 of rule 21 of the rules of procedure, the following officers were elected, by acclamation, to the Bureau of the Twenty-Third Meeting of the Parties to the Montreal Protocol:

President:	Mr. Sianga Abilio	Angola (African States)
Vice-Presidents:	Ms. Azra Rogovic-Grubic	Bosnia and Herzegovina (Eastern European States)
	Mr. Javier Ernesto Camargo	Colombia (Latin American and Caribbean States)
	Mr. Arief Yuwono	Indonesia (Asian and Pacific States)
Rapporteur:	Mr. Bernard Made	Canada (Western Europe and other States)

**C. Adoption of the agenda of the high-level segment of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol**

169. The following agenda for the high-level segment was adopted on the basis of the provisional agenda contained in document UNEP/OzL.Conv.9/1-UNEP/OzL.Pro.23.1:

1. Opening of the high-level segment:
  - (a) Statement by representative(s) of the Government of Indonesia;
  - (b) Statement by representative(s) of the United Nations Environment Programme;
  - (c) Statement by the President of the eighth meeting of the Conference of the Parties to the Vienna Convention
  - (d) Statement by the President of the Twenty-Second Meeting of the Parties to the Montreal Protocol.
2. Organizational matters:
  - (a) Election of officers of the ninth meeting of the Conference of the Parties to the Vienna Convention;
  - (b) Election of officers of the Twenty-Third Meeting of the Parties to the Montreal Protocol;
  - (c) Adoption of the agenda of the high-level segment of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol;
  - (d) Organization of work;
  - (e) Credentials of representatives.
3. Presentations by the assessment panels on their 2010 quadrennial assessment.
4. Presentation by the Chair of the Executive Committee of the Multilateral Fund on the work of the Executive Committee.
5. Statements by heads of delegations.
6. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol.
7. Dates and venues for the tenth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Fourth Meeting of the Parties to the Montreal Protocol.
8. Other matters.
9. Adoption of decisions by the Conference of the Parties to the Vienna Convention at its ninth meeting.
10. Adoption of decisions by the Twenty-Third Meeting of the Parties to the Montreal Protocol.
11. Adoption of the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol.
12. Closure of the meeting.

**D. Organization of work**

170. The parties agreed to follow their customary procedures.

**E. Credentials of representatives**

171. The Bureaux of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol approved the credentials of the representatives of 86 of the 127 parties represented. The Bureaux provisionally approved the participation of other parties on the understanding that they would forward their credentials to the

Secretariat as soon as possible. The Bureaux urged all parties attending future meetings of the parties to make their best efforts to submit credentials to the Secretariat as required under rule 18 of the rules of procedure. The Bureaux also recalled that under the rules of procedure credentials had to be issued either by a Head of State or Government or by a minister for foreign affairs or, in the case of a regional economic integration organization, by the competent authority of that organization. The Bureaux further recalled that representatives of parties not presenting credentials in the correct form could be precluded from full participation in the meetings of the parties, including the right to vote.

### **III. Presentations by the assessment panels on their 2010 quadrennial assessment**

172. Members of the Montreal Protocol's three assessment panels and their technical options committees made presentations on the panels' 2010 quadrennial assessments.

173. Mr. John Pyle and Mr. Paul Newman spoke about the scientific findings discussed in the 2011 synthesis report and the scientific assessment of the Scientific Assessment Panel, including matters such as the total abundance of ozone-depleting substances in the atmosphere, prospects for further control of methyl bromide and the interaction between ozone-layer depletion and climate change, including the role of HFCs.

174. Ms. Janet Bornman and Mr. Nigel Paul gave an overview of the key findings of the 2010 Environmental Effects Assessment Panel report, and then summarized the effects of ultraviolet radiation and climate change interactions on human health, terrestrial and aquatic ecosystems, biogeochemical cycles, air quality and construction materials.

175. Mr. Ian Rae began the presentation by the Technology and Economic Assessment Panel, providing an overview of that panel's report and summaries from each of the technical options committees. He then continued with the report of the Chemicals Technical Options Committee and was followed by Mr. Miguel Quintero with the report of the Flexible and Rigid Foams Technical Options Committee, Mr. Sergey Kopylov with the report of the Halons Technical Options Committee, Ms. Marta Pizano with the report of the Methyl Bromide Technical Options Committee, Mr. Lambert Kuijpers with the report of the Refrigeration, Air Conditioning and Heat Pumps Technical Options Committee, and Ms. Helen Tope with the report of the Medical Technical Options Committee. Ms. Tope concluded the presentations with a summary of the Panel's portion of the synthesis report.

176. Summaries of the presentations, as prepared by the presenters and without formal editing, are set out in annex X to the present report.

177. The parties took note of the information presented.

### **IV. Presentation by the Chair of the Executive Committee of the Multilateral Fund on the work of the Executive Committee**

178. Mr. Patrick McInerney (Australia), chair of the Executive Committee of the Multilateral Fund, delivered a presentation on the Committee's activities since the Twenty-Second Meeting of the Parties, encompassing the Committee's sixty-second, sixty-third, sixty-fourth and sixty-fifth meetings. He summarized the report contained in document UNEP/OzL.Pro.23/8 and said that between its sixty-second and the sixty-fifth meetings the Executive Committee had approved a total of 349 additional projects and activities with a planned phase-out of production and consumption of 1,465 ODP-tonnes of controlled substances. The funds approved for projects and activities totalled \$274,468,323, including \$30,232,360 for agency support costs. That included funding for 91 stage I HCFC phase-out management plans for 102 countries, including the management plan for China. Those approvals had been enabled by applying the HCFC cost guidelines agreed in decision 60/44 and resolving certain policy issues related to HCFC phase-out.

179. The Executive Committee had considered activities and projects to phase out HCFCs pursuant to decision XIX/6. On a case-by-case basis, it had provided funding to phase out more than 10 per cent of countries' estimated HCFC baselines and would continue to do so. It had also calculated the starting points for aggregate reductions in HCFC consumption for HCFC phase-out management plans and additional funding for HCFC conversion projects submitted outside of approved HCFC phase-out management plans. Such funding could be considered on an exceptional and case-by-case basis, especially when it was for enterprises exclusively reliant on imported HCFC-141b pre-blended polyol systems that had not been reported as consumption. The Multilateral Fund Secretariat would also prepare a paper on options for a tracking system to correlate, by country, the amounts of HCFC 141b-based pre-blended polyols exported by system houses with the amounts used by foam

enterprises, and which had been approved for phase-out, in importing parties operating under paragraph one of Article 5 of the Protocol.

180. Funding would be made available for faster phase-out of HCFCs beyond 2020 for low-volume-consuming countries. It would be calculated from the funding agreed to meet the 35 per cent reduction in consumption established under the HCFC cost guidelines. The Executive Committee had agreed to consider, on a case-by-case basis, stage I of the HCFC phase-out management plans of former low-volume-consuming countries, with a consumption of over 360 metric tonnes in the refrigeration servicing sector only. Funding would also be provided on a case-by-case basis. The Committee had also established a window for ozone-depleting substance destruction technologies for low-volume-consuming countries pursuant to decision XXI/2, and ozone-depleting substance disposal demonstration projects had been approved for Ghana, Mexico, and Cuba.

181. He said that funding for projects to phase out HCFC-22 in the manufacture of refrigeration and air-conditioning equipment would be considered if the project proposals included information on estimated future amounts of HCFC-22 that could be required for servicing such equipment until 2020 and clearly demonstrated how the projects could reduce the growth of HCFC consumption for servicing that equipment. Work on the HCFC production sector was under way and an interim report on the technical audit of HCFC production plants in China had been presented to the members of the subgroup on the production sector.

182. A number of other policy issues had also been considered, including funding for those countries whose consumption was between 361 and 400 metric tonnes in the servicing sector. The Executive Committee reiterated that funding for institutional strengthening as part of HCFC phase-out management plans was subject to the performance-based targets of the plans. The Executive Committee had also set a cost-effectiveness threshold for the rigid insulation refrigeration foam subsector and had discussed the incremental costs related to retooling for the manufacture of heat exchangers.

183. Further progress had been made regarding the outstanding contributions of the Russian Federation, and senior representatives of the Russian Ministries of Foreign Affairs and Natural Resources and Environment had participated in an informal meeting on the margins of the current meeting. The Secretariat of the Multilateral Fund had been informed that the Ministry of Finance of the Russian Federation had taken steps to resolve the issue, and dialogue was continuing.

184. In summary he said that at its meetings the Executive Committee had been mindful that 2011 was the last year of the current Multilateral Fund funding triennium and that it needed to ensure that the goals set by the parties for the period 2009–2011 were successfully met. The work of the Executive Committee had placed the goals of the 2013 freeze and the 2015 ten per cent reduction in HCFC consumption firmly within the reach of the parties.

185. He then spoke on behalf of the implementing agencies. The United Nations Development Programme (UNDP) was operating a programme with a total value of \$616 million in over 100 countries. During 2011, HCFC phase-out management plans and sector plans for 30 countries had been submitted to the Executive Committee, including China where UNDP was the lead agency. UNDP had also engaged with partner countries and technology providers to find the best available solutions to industrial conversion that also took into account global-warming potential and energy efficiency. UNDP was assessing relatively new technological developments that had not been used in developing countries and had reported on the progress achieved in pilot and validation projects in the foam, solvent and refrigeration sectors as well as on ozone-depleting substance waste destruction projects in Brazil, Colombia, Ghana and India.

186. UNEP was currently working as lead agency in 51 countries and as cooperating agency in 22 countries in preparing HCFC phase-out management plans. Under its Compliance Assistance Programme, UNEP had been providing support to Governments at risk of non-compliance and had supported the ratification of amendments to the Montreal Protocol through the regional networks, thematic meetings and country-to-country cooperation. Special attention had been given to newly appointed national ozone officers, and UNEP had used a variety of means such as partnerships and cooperation with private companies and refrigeration and air conditioning associations, information on existing technology options and opportunities for climate benefits.

187. The United Nations Industrial Development Organization (UNIDO) had provided assistance to 78 countries operating under paragraph 1 of Article 5 of the Montreal Protocol through 270 projects. Since the Twenty-Second Meeting of the Parties, the Executive Committee had approved funding for 95 new projects to be implemented by UNIDO, phasing out a total of 807 ODP-tonnes of controlled substances in 59 different countries operating under paragraph 1 of Article 5. A project on resource



mobilization for HCFC phase-out and climate co-benefits had also been approved for UNIDO at the sixty-second meeting of the Executive Committee and UNIDO had contributed to promoting new technologies that coupled climate benefits with zero ozone-depletion potential.

188. The World Bank had expanded its Montreal Protocol portfolio to address HCFCs in three large countries in East Asia, and once completed in 2015 those projects would permanently eliminate approximately 15,500 metric tonnes of HCFC-141b consumption, equivalent to 12 million tonnes of carbon dioxide. The World Bank had also started to work with the Government of China to reduce its production levels to match the HCFC-141b consumption reductions that many other countries were undertaking in line with decision XIX/6.

189. The parties took note of the information presented.

## V. Statements by heads of delegations

190. During the high-level segment statements were made by heads of delegation of the following parties, listed in the order in which they spoke: Sri Lanka, Maldives, Iran (Islamic Republic of), Indonesia, China, Japan, Switzerland, European Union and its member States, Lao People's Democratic Republic, Cambodia, Paraguay, India, Guinea, Kenya, Pakistan, Uzbekistan, Zimbabwe, Iraq, Cote d'Ivoire, Palau, Malaysia, Seychelles, Nepal, Mozambique, Mongolia and Bangladesh. The representative of South Sudan, the world's newest country, also made a statement, as did the representatives of an intergovernmental body and a non-governmental organization.

191. Representatives of all parties who spoke thanked the Government and people of Indonesia for their hospitality in hosting the current meeting and remarked on the beauty of the island of Bali. Many thanked UNEP and the Ozone Secretariat, the Multilateral Fund secretariat and implementing agencies, donor countries, the assessment panels, international organizations and other stakeholders for their roles in ensuring the success of the meeting and the successful development and implementation of the Protocol, and they congratulated the members of the bureau on their election.

192. Many representatives reiterated their commitment to the objectives of the Protocol, and some countries that had not yet ratified certain amendments affirmed their intention to do so. Many representatives described their countries' efforts to meet their obligations under the Protocol. Achievements included the phase-out of the production and consumption of controlled substances, in a number of cases ahead of the deadlines established under the Protocol; the promotion of alternative substances and technologies, including climate-friendly technologies; training and capacity-building; awareness-raising; and the enhancement of cooperation among government ministries, public and private stakeholders, international organizations and the parties themselves. Several representatives referred to their attempts to ensure that phase-out was achieved in a sustainable manner. Some also noted the synergistic effects of their phase-out efforts, such as climate co-benefits and strengthened procedures and security measures related to other controlled substances.

193. Representatives praised the Montreal Protocol, characterizing it as the most successful international mechanism for environmental protection and citing it as a model for multilateral environmental agreements and for cooperation between developed and developing countries. Many called on the expertise gained through implementation of the Protocol to be used to accelerate destruction of banks of ozone-depleting substances and development of alternatives to those substances, as well as to address new challenges such as climate change.

194. In the context of the replenishment of the Multilateral Fund many representatives spoke about the financial challenges faced by the parties, in particular parties operating under paragraph 1 of Article 5 of the Protocol. Representatives of such parties called on donors to provide adequate financial assistance to ensure that accelerated HCFC phase-out targets could be achieved. Representatives of donor countries noted the effects of the global economic crisis on their countries and the need to ensure that funds were used as efficiently as possible, while reaffirming their commitment to ensuring that the Protocol continued to function effectively and recognizing the need for financial assistance to parties operating under paragraph 1 of Article 5.

195. A number of representatives were pleased to announce the approval of their country's HCFC phase-out management plans. Many representatives from parties operating under paragraph 1 of Article 5 spoke about the challenges their countries faced in implementing their phase-out plans, saying that sustained financial and technical support were needed to ensure that targets could be met. Many also emphasized the need for effective, regionally appropriate and economically, technically and environmentally viable alternatives to HCFCs.

196. A large number of representatives spoke about the control of HFCs. Many supported taking steps under the Protocol to begin addressing HFCs, arguing that their expanding use resulted almost entirely from the Protocol's controls on CFCs and HCFCs and that doing so would yield important climate benefits. Others said that the parties should not address HFCs; they said, among other things, that they were beyond the scope of the Protocol and more appropriately addressed under the Framework Convention on Climate Change. In addition, they said that the challenges of HCFC phase-out and destruction of banks of ozone-depleting substances still remained and that viable alternatives to HFCs were not available in all sectors. At the same time, many representatives acknowledged that the negative impacts of high-GWP alternatives on the climate had to be carefully considered.

197. In that regard, several representatives urged that synergies with other multilateral environmental agreements be enhanced to address the broader climate change issues arising from implementation of the Protocol.

198. Methyl bromide use, particularly in quarantine and pre-shipment applications, remained a concern. Several representatives observed that commercially and technically viable alternatives were available, and they urged parties using methyl bromide, particularly for quarantine and pre-shipment, to make use of them. Representatives from developing countries called attention to the need for shared information on alternatives and the transfer of technologies. Some proposed improved monitoring and the harmonization of trade standards as a more strategic means of reducing quarantine and pre-shipment use.

199. Many representatives agreed that ensuring the environmentally sound management and destruction of the growing amount of ozone-depleting substances, including those contained in banks, would enhance efforts to protect the ozone layer and mitigate climate change. A number of representatives of developing countries said that they were hampered in their ability to deal with banks of ozone-depleting substances by a lack of material and financial resources and called upon the Multilateral Fund to provide assistance in that area. One representative described his country's success in developing effective destruction technologies and offered to share knowledge on the subject.

200. A number of representatives said that institutional strengthening had played an important role in building the capacity of developing countries to implement the Protocol. They called for continued funding for institutional strengthening for the accelerated phase-out of HCFCs; eliminating production and consumption of methyl bromide, including for quarantine and pre-shipment applications; destruction of obsolete ozone-depleting substances; and control of illegal trade and illegal disposal of such substances.

201. In his statement, the representative of Nepal appealed to the parties to reconsider his country's request to be treated as a party in accordance with paragraphs 8 and 9 of Article 4 of the Montreal Protocol, reiterating the arguments made during the preparatory segment.

202. The representative of South Sudan affirmed his Government's commitment to ratifying the Protocol and its amendments, and he requested the support of the parties to enable South Sudan to achieve the targets of the Protocol.

203. The representative of the International Institute of Refrigeration, an intergovernmental organization, noted the importance of refrigeration and cooling technologies to modern human life, particularly in developing countries in the tropics. He recommended the coordination of efforts under the Montreal Protocol and the Framework Convention on Climate Change, an emphasis on training for better refrigerant containment, incentives for the use of low-GWP alternatives and enhanced availability and use of information by all parties.

204. The representative of a non-governmental organization expressed regret for what she termed a failure of leadership and a lack of progress in the discussions on phasing out HFCs under the Montreal Protocol. Citing the work of several organizations employing proven HFC-free alternatives to HCFCs, she said that the chemical industry was misusing the political process and the Montreal Protocol to serve solely commercial interests, at the expense of environmental safety, and she called on the parties to stop funding HFC-based projects.

## **VI. Report of the co-chairs of the preparatory segment and consideration of the decisions recommended for adoption at the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol**

205. The Co-Chairs of the preparatory segment reported at various points during the meeting. They noted that, although negotiations during the preparatory segment had been difficult, considerable progress had been made on a number of important issues. Thanking the parties for their great efforts, the contact group chairs for their leadership, the Secretariat for its excellent work and professionalism and the interpreters and other behind-the-scenes staff for making it possible for the parties to do their work, they commended the draft decisions approved during the segment for adoption by the Meeting of the Parties.

## **VII. Dates and venues for the tenth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Fourth Meeting of the Parties to the Montreal Protocol**

206. In his statement during the high-level segment, the representative of Switzerland conveyed an offer by his Government to host the Twenty-Fourth Meeting of the Parties to the Montreal Protocol. In the light of that offer the parties adopted a decision providing that the Twenty-Fourth Meeting of the Parties would take place in Geneva from 12 to 16 November 2012 unless other suitable arrangements needed to be made in consultation with the Bureau. They also adopted decisions to the effect that the tenth meeting of the Conference of the Parties to the Vienna Convention would be held back to back with the Twenty-Sixth Meeting of the Parties, at a time and place to be determined. Also in his statement during the high-level segment the representative of Côte d'Ivoire announced that his Government desired to host the Twenty-Fifth Meeting of the Parties to the Montreal Protocol and would explore the possibility of doing so with the Secretariat.

## **VIII. Other matters**

207. The parties took up no other matters during the high-level segment.

## **IX. Adoption of decisions by the Conference of the Parties to the Vienna Convention at its ninth meeting**

208. *The Conference of the Parties* decides:

### **IX/1: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol**

1. To note with satisfaction the large number of countries that have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;

2. To note that, as at 1 November 2011, 196 parties had ratified the London Amendment to the Montreal Protocol, 194 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 185 parties had ratified the Montreal Amendment to the Montreal Protocol and 171 parties had ratified the Beijing Amendment to the Montreal Protocol;

3. To urge all States that have not yet done so to ratify, approve or accede to the amendments to the Montreal Protocol, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

### **IX/2: Eighth meeting of the Ozone Research Managers and the Trust Fund for Research and Systematic Observation relevant to the Vienna Convention**

*Recalling* that, pursuant to the objective defined in decision I/6 of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer, the ozone research managers review ongoing national and international research and monitoring programmes with a view to ensuring the proper coordination of those programmes and identifying gaps that need to be addressed,

*Recognizing* that it is necessary and important to continue to monitor changes in the ozone layer and to understand the scale of the impact on the ozone layer of increasing concentrations of greenhouse gases and the implementation of the Vienna Convention on the Protection of the Ozone Layer,

*Recalling* decision VI/2, by which the Conference of the Parties established the Vienna Convention Trust Fund for Financing Activities on Research and Systematic Observations Relevant to the Vienna Convention for the Protection of the Ozone Layer,

*Noting with appreciation* the contributions to the Trust Fund by several parties and the joint efforts of the World Meteorological Organization and the Ozone Secretariat in the implementation of the activities funded by the Trust Fund,

*Noting* that the Ozone Research Managers at their eighth meeting stated that although there had been progress in building capacity since their seventh meeting in 2008, much remained to be accomplished,

1. To take note with appreciation of the report of the eighth meeting of the Ozone Research Managers;
2. To encourage parties:
  - (a) To adopt the recommendations in report No. 53 of the World Meteorological Organization Global Ozone Research and Monitoring Project;
  - (b) To maintain research capabilities that enable measurements and scientific understanding of ozone depletion and evolution in a changing atmosphere including:
    - (i) Improvement and validation of coupled chemistry-climate and earth system models to take better account of ozone parameters and other atmospheric processes;
    - (ii) Continued and increased exploitation of long-term measurements and data for scientific process studies;
    - (iii) Support for fundamental laboratory studies to estimate photochemical reaction rates and to refine and update older measurements;
  - (c) To maintain, expand and integrate systematic ozone-related observations that are critical to understanding and monitoring the long term changes in atmospheric composition and the associated response in ground level ultraviolet radiation;
  - (d) To continue to implement the recommendations of the seventh meeting of the Ozone Research Managers in relation to data archiving and to encourage the reprocessing and salvage of archival data;
  - (e) To accord priority to supporting and implementing the following capacity-building activities recommended by the Ozone Research Managers:
    - (i) Development of a mechanism under the auspices of the World Meteorological Organization Global Atmosphere Watch to enable countries to donate good-quality, operational equipment through the World Meteorological Organization for deployment to developing countries as a means of enhancing the global operational network of ozone-observing and UV-observing stations, including tasking the scientific advisory committees for ozone and ultraviolet radiation of Global Atmosphere Watch with assessing the overall global needs for the distribution of the equipment, noting the need to ensure training of experts from developing countries in this technology;
    - (ii) Provision of financial support from the Trust Fund to support the participation of professional and technical persons from developing countries in the following workshops:
      - a. Second Dobson workshop planned for 2013 as a follow-up to the successful workshop held in the Czech Republic in 2011;

- b. Ozone-observing and UV-observing workshop organized in conjunction with the 2012 quadrennial ozone symposium in Toronto, Canada;
  3. To encourage the Ozone Research Managers to develop measures that would enable them to assess the effectiveness of capacity-building activities in the future;
  4. In relation to the Trust Fund:
    - (a) To urge all parties and relevant international organizations to make voluntary financial and/or in kind contributions to the Trust Fund;
    - (b) To request the Secretariat to continue to invite parties and relevant international organizations annually to make voluntary contributions to the Fund and, with each such invitation to parties, to report on the prior years' contributions, funded activities and planned future activities;
    - (c) To request the Secretariat and invite the World Meteorological Organization to continue their cooperation with regard to activities funded by the Trust Fund;
    - (d) Also to request the Secretariat and invite the World Meteorological Organization to strive for regional balance in the activities supported by the Trust Fund and to encourage complementary funding to maximize Trust Fund resources;
    - (e) To request the Secretariat to report to the Conference of the Parties at its tenth meeting on the operation of, contributions to and expenditures from the Trust Fund and on the activities funded by the Trust Fund since its inception;
  5. To encourage the national ozone focal points to distribute information on, and coordinate, monitoring and scientific activities in their countries where relevant;

### **IX/3: Financial matters: financial reports and budgets**

*Recalling* decision VIII/4 on financial matters,

*Taking* note of the financial report on the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer for the biennium 2010–2011, ended 31 December 2010,

*Recognizing* that voluntary contributions are an essential complement for the effective implementation of the Vienna Convention,

*Welcoming* the continued excellent management by the Secretariat of the finances of the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer,

1. To take note with appreciation of the financial statement of the Trust Fund for the biennium 2010–2011 ended 31 December 2010 and the report on the actual expenditures for 2010 as compared to the approvals for that year;
2. To approve the 2012 budget for the Trust Fund in the amount of \$723,063, the budget for 2013 in the amount of \$735,622 and the budget for 2014 in the amount of \$1,280,311 as set out in annex I to the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol;<sup>2</sup>
3. To authorize the Secretariat to draw down the amounts of \$120,063 in 2012, \$132,622 in 2013 and \$677,311 in 2014, respectively, from the Fund balance for the purpose of reducing that balance;
4. To ensure, as a consequence of the drawdowns referred to in paragraph 3, that the contributions to be paid by the parties amount to \$603,000 for each of the years 2012, 2013 and 2014 as set out in annex II to the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol;
5. To urge all parties to pay their outstanding contributions as well as their future contributions promptly and in full;

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<sup>2</sup> UNEP/OzL.Conv.9/7-UNEP/OzL.Pro.23/11.

## **IX/4: Tenth meeting of the Conference of the Parties to the Vienna Convention**

To convene the tenth meeting of the Conference of the Parties to the Vienna Convention back to back with the Twenty-Sixth Meeting of the Parties to the Montreal Protocol.

## **X. Adoption of decisions by the Twenty-Third Meeting of the Parties to the Montreal Protocol**

209. *The Twenty-Third Meeting of the Parties decides:*

### **XXIII/1: Status of ratification of the Vienna Convention, the Montreal Protocol and the London, Copenhagen, Montreal and Beijing amendments to the Montreal Protocol**

1. To note with satisfaction the large number of countries that have ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer;

2. To note that, as at 1 November 2011, 196 parties had ratified the London Amendment to the Montreal Protocol, 194 parties had ratified the Copenhagen Amendment to the Montreal Protocol, 185 parties had ratified the Montreal Amendment to the Montreal Protocol and 171 parties had ratified the Beijing Amendment to the Montreal Protocol;

3. To urge all States that have not yet done so to ratify, approve or accede to the amendments to the Montreal Protocol, taking into account that universal participation is necessary to ensure the protection of the ozone layer;

### **XXIII/2: Essential-use nominations for controlled substances for 2012**

*Noting* with appreciation the work done by the Technology and Economic Assessment Panel and its Medical Technical Options Committee,

*Mindful* that, according to decision IV/25, the use of chlorofluorocarbons for metered-dose inhalers does not qualify as an essential use if technically and economically feasible alternatives or substitutes are available that are acceptable from the standpoint of environment and health,

*Noting* the Panel's conclusion that technically satisfactory alternatives to chlorofluorocarbon-based metered-dose inhalers are available for some therapeutic formulations for treating asthma and chronic obstructive pulmonary disease,

*Taking* into account the Panel's analysis and recommendations for essential-use exemptions for controlled substances for the manufacture of metered-dose inhalers used for asthma and chronic obstructive pulmonary disease,

*Welcoming* the continued progress in several parties operating under paragraph 1 of Article 5 in reducing their reliance on chlorofluorocarbon-based metered-dose inhalers as alternatives are developed, receive regulatory approval and are marketed for sale,

*Welcoming* the announcement by Bangladesh that it will not, in the future, submit essential-use nominations for the use of chlorofluorocarbons in metered-dose inhalers,

1. To authorize the levels of production and consumption for 2012 necessary to satisfy essential uses of chlorofluorocarbons for metered-dose inhalers for asthma and chronic obstructive pulmonary disease specified in the annex to the present decision;

2. To request nominating parties to supply to the Medical Technical Options Committee information to enable assessment of essential-use nominations in accordance with the criteria set out in decision IV/25 and subsequent relevant decisions as set out in the handbook on essential-use nominations;

3. To encourage parties with essential-use exemptions in 2012 to consider sourcing required pharmaceutical-grade chlorofluorocarbons initially from stockpiles where they are available and accessible, provided that such stockpiles are used subject to the conditions established by the Meeting of the Parties in paragraph 2 of its decision VII/28;

4. To encourage parties with stockpiles of pharmaceutical-grade chlorofluorocarbons potentially available for export to parties with essential-use exemptions in 2012 to notify the Secretariat of such quantities and of a contact point by 31 December 2011;
5. To request the Secretariat to post on its website details of the potentially available stocks referred to in the preceding paragraph;
6. That the parties listed in the annex to the present decision shall have full flexibility in sourcing the quantity of pharmaceutical-grade chlorofluorocarbons to the extent required for manufacturing metered-dose inhalers, as authorized in paragraph 1 above, from imports, from domestic producers or from existing stockpiles;
7. To request parties to consider domestic regulations to ban the launch or sale of new chlorofluorocarbon-based metered-dose inhaler products, even if such products have been approved;
8. To encourage parties to fast-track their administration processes for the registration of metered-dose inhaler products in order to speed up the transition to chlorofluorocarbon-free alternatives;
9. To approve the authorization granted Mexico by the Secretariat, in consultation with the Technology and Economic Assessment Panel, for the emergency essential-use of six metric tonnes of pharmaceutical-grade CFC-12 for the production of metered-dose inhalers, to cover the period 2011–2012;

## **Annex to decision XXIII/2**

### **Essential-use authorizations for 2012 for chlorofluorocarbons for metered-dose inhalers (in metric tonnes)**

<b>Parties</b>	<b>2012</b>
Bangladesh	40.35
China	532.04
Pakistan	24.1
Russian Federation	212

### **XXIII/3: Essential-use exemption for chlorofluorocarbon-113 for aerospace applications in the Russian Federation**

*Taking note* of the evaluation and recommendation of the Technology and Economic Assessment Panel and its Chemicals Technical Options Committee in respect of the essential-use nomination for chlorofluorocarbon-113 (CFC-113) for aerospace applications in the Russian Federation,

*Noting* that the Russian Federation has presented the Chemical Technical Options Committee with the requested information and explanations regarding the current and future situation in relation to the use of CFC-113 in the aerospace industry,

*Noting* that the Committee has reported that the new nomination of the Russian Federation satisfies, in principle, the criteria to qualify as essential use under the decision IV/25, including the absence of available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health,

*Noting* that the Committee recommends the acceleration of efforts to introduce appropriate alternatives, to investigate materials compatible with alternatives, and the adoption of newly designed equipment to complete the phase-out of CFC-113 within an accelerated time schedule,

1. To authorize an essential-use exemption for the production and consumption in 2012 of 100 metric tonnes of CFC-113 in the Russian Federation for chlorofluorocarbon applications in its aerospace industry;
2. To request the Russian Federation to continue to explore further the possibility of importing CFC-113 of the required quality for its aerospace industry needs from available global stocks as recommended by the Technology and Economic Assessment Panel;

3. To request the Russian Federation to accelerate its efforts to introduce alternative solvents in order to gradually reduce consumption of the CFC-113 in the aerospace industry to a maximum of 75 tons in 2015;

4. To request the Russian Federation to provide as part of its next essential-use exemption nomination a final phase-out plan with an expected end-date, the gradual reduction steps and information on the source of the CFC-113;

## **XXIII/4: Critical-use exemptions for methyl bromide for 2013**

*Noting with appreciation* the work by the Technology and Economic Assessment Panel and its Methyl Bromide Technical Options Committee,

*Recognizing* the significant reductions made in critical-use nominations for methyl bromide in many parties,

*Recalling* paragraph 10 of decision XVII/9,

*Recalling also* that all parties that have nominated critical-use exemptions are to report data on stocks using the accounting framework agreed to by the Sixteenth Meeting of the Parties,

*Recognizing* that the production and consumption of methyl bromide for critical uses should be permitted only if methyl bromide is not available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide,

*Recognizing also* that parties operating under critical-use exemptions should take into account the extent to which methyl bromide is available in sufficient quantity and quality from existing stocks of banked or recycled methyl bromide in licensing, permitting or authorizing the production and consumption of methyl bromide for critical uses,

1. To permit, for the agreed critical-use categories for 2013 set forth in table A of the annex to the present decision for each party, subject to the conditions set forth in the present decision and in decision Ex.I/4 to the extent that those conditions are applicable, the levels of production and consumption for 2013 set forth in table B of the annex to the present decision which are necessary to satisfy critical uses, with the understanding that additional levels of production and consumption and categories of uses may be approved by the Meeting of the Parties in accordance with decision IX/6;

2. That parties shall endeavour to license, permit, authorize or allocate quantities of methyl bromide for critical uses as listed in table A of the annex to the present decision;

3. To recognize the continued contribution of the Methyl Bromide Technical Options Committee's expertise and to agree that, in accordance with section 4.1 of the terms of reference of the Technology and Economic Assessment Panel, the Committee should ensure that it develops its recommendations in a consensus process that includes full discussion among all available Committee members and should ensure that members with relevant expertise are involved in developing its recommendations;

4. That each party that has an agreed critical-use exemption shall renew its commitment to ensuring that the criteria in paragraph 1 of decision IX/6, in particular the criterion laid down in paragraph 1 (b) (ii) of decision IX/6, are applied in licensing, permitting or authorizing critical uses of methyl bromide, with each party requested to report on the implementation of the present provision to the Ozone Secretariat by 1 February for the years to which the present decision applies;

5. To request the Technology and Economic Assessment Panel to ensure that its consideration of nominations analyse the impact of national, subnational, and local regulations and law on the potential use of methyl bromide alternatives, and include a description of the analysis in the critical use nomination report;

6. To urge parties operating under critical-use exemptions to put in place effective systems to discourage the accumulation of methyl bromide produced under the exemptions;

### **Annex to decision XXIII/4**

Table A  
**Agreed critical-use categories for 2013 (metric tonnes)**



Australia	Strawberry runners (29.760), rice (2.374)
Canada	Mills (7.848), strawberry runners (Prince Edward Island) (5.261)
Japan	Chestnuts (3.317)
United States of America	Commodities (.822), mills and foodprocessing structures (25.334), dried cured pork (3.730), cucurbits (3.886), eggplant – field (1.381), nursery stock – fruit, nuts, flowers (.476), orchard replants (6.230), ornamentals (40.818), peppers – field (5.604), strawberry – field (461.186), strawberry runners (3.752), tomatoes – field (9.107)

Table B  
Permitted levels of production and consumption for 2013 (metric tonnes)

Australia	32.134
Canada	13.109
Japan	3.317
United States of America	562.326*

\* Minus available stocks.

## XXIII/5: Quarantine and pre-shipment uses of methyl bromide

*Recognizing* the value of developing a strategic view on the use of methyl bromide for quarantine and pre-shipment purposes and the importance of enhancing the data available for that purpose,

*Mindful* that consistent reporting on methyl bromide consumption for quarantine and pre-shipment purposes would facilitate monitoring and review of quarantine and pre-shipment consumption and uses,

*Recalling* decision XI/13, and in particular its paragraph 3, requiring each party to provide the Secretariat with statistical data on the amount of methyl bromide used annually for quarantine and pre-shipment applications,

*Recalling also* the recommendation of the Commission on Phytosanitary Measures of the International Plant Protection Convention on the replacement or reduction of the use of methyl bromide as a phytosanitary measure<sup>3</sup>, adopted in 2008, and decisions XX/6 and XXI/10, encouraging parties to the Montreal Protocol to implement that recommendation,

*Recalling* the definitions of “quarantine” and “pre-shipment” set forth in decisions VII/5 and XI/12 and noting the importance of applying them consistently,

*Recalling* that under specification 16 alternatives to methyl bromide use for phytosanitary purposes approved by national plant protection organizations are to be submitted under the International Plant Protection Convention,

1. To encourage parties to follow the recommendation of the Commission on Phytosanitary Measures of the International Plant Protection Convention that data on current usage of methyl bromide as a phytosanitary measure should be accurately recorded and collated, including information on the quantities of methyl bromide used in kilograms, a description of the articles fumigated, where appropriate, whether the use was on imported or exported commodities and target pests;

2. To invite parties in a position to do so, on a voluntary basis, to submit information to the Ozone Secretariat by 31 March 2013 on:

(a) The amount of methyl bromide used to comply with phytosanitary requirements of destination countries;

(b) Phytosanitary requirements for imported commodities that must be met through the use of methyl bromide and to request the Secretariat to forward the information to the Technology and Economic Assessment Panel;

3. To urge parties to comply with the reporting requirements of Article 7 and to provide data on the amount of methyl bromide used for quarantine and pre-shipment applications annually and to invite parties in a position to do so, on a voluntary basis, to supplement such data by reporting to the Secretariat information on methyl bromide uses recorded and collated pursuant to the recommendation of the Commission on Phytosanitary Measures;

4. To encourage parties to consider avoiding requiring multiple treatments of consignments with methyl bromide unless a risk of an infestation with a pest has been identified;

5. To request the Technology and Economic Assessment Panel to provide, for consideration by the Open-ended Working group at its thirty-second meeting, a concise report that:

(a) Summarizes data submitted under article 7 of the Montreal Protocol on a regional basis, providing analysis of trends in that data;

(b) Provides guidance on procedures and methods for data collection on methyl bromide use for quarantine and pre-shipment for parties that have not yet established such procedures and methods or wish to improve existing ones;

6. To request the Technology and Economic Assessment Panel to provide, for consideration by the Open-ended Working group at its thirty-third meeting, a concise report based on the information provided in accordance with paragraph 2 above;

7. To request the Secretariat to consult the Secretariat of the International Plant Protection Convention on how to ensure and improve the exchange of information on methyl bromide uses and alternative treatments between the Convention and Montreal Protocol bodies and on the systems available to facilitate access to such information by national authorities and private organizations, and to report to the Open-ended Working group at its thirty-second meeting on the outcome of such consultation and on cooperation in general between the Convention and the Protocol;

## **XXIII/6: Global laboratory and analytical-use exemption**

*Recalling* decision XXI/6, in which parties are requested to investigate the possibility of replacing ozone-depleting substances with alternatives identified by the Technology and Economic Assessment Panel in its 2010 progress report,

*Recalling further* decision XI/15, by which the parties, among other things, eliminated the use of ozone-depleting substances for the testing of oil, grease and total petroleum hydrocarbons in water from the global exemption for laboratory and analytical uses,

*Acknowledging* the work being carried out by the Technology and Economic Assessment Panel to identify ozone-depleting substances still being used for laboratory and analytical purposes, ozone-depleting substances that might still be mandated in certain standards, and available alternatives to ozone-depleting substances,

*Noting* that individual parties operating under paragraph 1 of Article 5 of the Montreal Protocol have reported difficulty in implementing existing alternatives to the use of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water and claim to need more time for information collection and related policy framework development,

1. To allow parties operating under paragraph 1 of Article 5 until 31 December 2014 to deviate from the existing ban on the use of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water in individual cases where such parties consider doing so to be justified;

2. To clarify that any deviation beyond that described in the preceding paragraph should take place only in accordance with an essential-use exemption, in particular in respect of:

(a) The use of carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water beyond 2014;

(b) Any other use already excluded from the global laboratory exemption beyond 2012;

3. To request parties operating under paragraph 1 of Article 5 to continue to take action to replace ozone-depleting substances for the testing of oil, grease and total petroleum hydrocarbons in water as soon as possible;

4. To request parties operating under paragraph 1 of Article 5 that use carbon tetrachloride for the testing of oil, grease or total petroleum hydrocarbons in water in accordance with paragraph 1 above to report annually to the Secretariat, together with their Article 7 report every year,

on the quantities of carbon tetrachloride used, including information on the procedures followed for using the substance, any alternative methods or procedures being investigated and the expected timeframe during which the Party will make use of the global exemption;

5. That the Implementation Committee and the Meeting of the Parties should defer until 2015 consideration of the compliance status in relation to the control measures for carbon tetrachloride for the testing of oil, grease and total petroleum hydrocarbons in water of parties operating under paragraph 1 of Article 5 that provide evidence to the Secretariat, with their data reports submitted in accordance with Article 7, showing that any deviation from the consumption target for carbon tetrachloride is due to the use of that substance in accordance with paragraph 1 above;

6. To request the Secretariat to prepare a reporting form to assist parties reporting information under paragraph 4 above;

7. To request the Technology and Economic Assessment Panel to review information provided by parties operating under paragraph 1 of Article 5 in accordance with paragraph 4 above, provide those parties with information and advice on means and methods of achieving a transition to the use of non-ozone-depleting substances, and report annually on information provided and progress in assisting parties;

8. To request the Panel and interested parties, with support from the Secretariat, to prepare information on laboratory and analytical uses for the purpose of assisting parties to achieve a transition to alternative methods and procedures and invites parties to consider contributing resources and information for that purpose;

9. To request the Panel to continue its work in reviewing international standards that mandate the use of ozone-depleting substances and to work with the organizations that promulgate such standards to include non-ozone-depleting substances and procedures as applicable;

10. To remind parties of the categories and examples of laboratory uses contained in annex IV of the report of the Seventh Meeting of the Parties, as updated by decision XI/15 and listed by the Panel in its progress reports, which can be used as a basis for determining what uses might be deemed to be laboratory and analytical uses;

## **XXIII/7: Use of controlled substances as process agents**

*Taking note* with appreciation of the 2011 progress report of the Technology and Economic Assessment Panel as it pertains to process agents,

*Recalling* that tables A and B of decision X/14 on process agent uses have been updated by decisions XV/6, XVII/7, XIX/15, XXI/3 and XXII/8,

*Noting* that the Panel's 2011 progress report takes into account the information provided by parties and the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in accordance with decision XXI/3,

*Noting* also that in the 2011 progress report the Panel proposes the removal of 27 processes from table A and indicates that only four parties reported process agent uses in 2009,

*Noting* with appreciation that most parties reported significantly lower emissions than those listed in table B,

*Acknowledging* the role that emissions from process agent uses might play in contributing to the abundance of carbon tetrachloride in the atmosphere and the need to reduce such emissions,

*Recalling* that according to decision IV/12 emissions of insignificant quantities of controlled substances, including from their use as process agents, are not considered to be controlled substances as defined in Article 1 of the Montreal Protocol,

*Recalling also* that decision IV/12 urges parties to take steps to minimize emissions of ozone-depleting substances used as process agents, including such steps as avoidance of the creation of such emissions and reduction of emissions using practicable control technologies, process changes, containment or destruction,

*Recalling further* decision XIX/15, in which the parties agreed to classify the use of carbon tetrachloride for the production of vinyl chloride monomer as a process agent use,

1. To update tables A and table B of decision X/14 as set out in the annex to the present decision;

2. To urge those parties that have yet to submit information on process agent uses as requested in decisions X/14 and XXI/3 to do so as a matter of urgency, and no later than 31 March 2012;
3. To remind parties that have provided information in accordance with decision XXI/3 indicating that they have process agent uses to provide further information, in particular on controlled substances and process agent applications in accordance with decision X/14, using the format available from the Ozone Secretariat;
4. To urge the parties listed in table B to revisit their maximum values and to report to the Technology and Economic Assessment Panel on how those values might be reduced, particularly in view of the process agent uses that have ceased;
5. To request the Panel, as further uses cease in the future, to consider corresponding reductions in make-up or consumption and maximum emissions accordingly in future proposals concerning table B;
6. To request the Panel to provide for the thirty-second meeting of the Open-ended Working Group a summary report updating its findings on process agent uses, taking into account relevant information from previous investigations and including:
  - (a) A descriptive overview of the processes using ozone-depleting substances as process agents;
  - (b) Information about alternatives to ozone-depleting substances in process-agent uses;
  - (c) Information on quantities used for process agent uses as reported in accordance with article 7 of the Montreal Protocol;
  - (d) Information on estimated emissions of ozone-depleting substances from process-agent uses and their impact on the ozone layer and the climate;
  - (e) Practicable measures to avoid and reduce emissions from process-agent uses;
7. To revisit the use of controlled substances as process agents at the thirty-second meeting of the Open-ended Working Group;
8. To consider the use of carbon tetrachloride for the production of vinyl chloride monomer for the purpose of calculated levels of production and consumption, on an exceptional basis, to be a feedstock use until 31 December 2012;
9. To request the Technology and Economic Assessment Panel to review the use of carbon tetrachloride for the production of vinyl chloride monomer process in India and other parties, if applicable, and to report on the results of that review in its 2012 progress report;

## Annex to decision XXIII/7

**Table A: List of uses of controlled substances as process agents**

No.	Process agent application	Substance	Permitted parties
1	Elimination of $\text{NCl}_3$ in chlor-alkali production	CTC	European Union, Israel, United States of America
2	Chlorine recovery by tail gas absorption in chlor-alkali production	CTC	European Union, United States of America
3	Production of chlorinated rubber	CTC	European Union
4	Production of chlorosulfonated polyolefin (CSM)	CTC	China, United States of America
5	Production of aramid polymer (PPTA)	CTC	European Union
6	Production of synthetic fibre sheet	CFC-11	United States of America
7	Photochemical synthesis of perfluoropolyetherpolyperoxide precursors of Z-perfluoropolyethers and difunctional derivatives	CFC-12	European Union
8	Preparation of perfluoropolyether diols with high functionality	CFC-113	European Union

9	Production of cyclodime	CTC	European Union
10	Production of chlorinated polypropene	CTC	China
11	Production of chlorinated ethylene vinyl acetate (CEVA)	CTC	China
12	Production of methyl isocyanate derivatives	CTC	China
13	Bromination of a styrenic polymer	BCM	United States of America
14	Production of high modulus polyethylene fibre	CFC-113	United States of America

**Table B: Limits for process agent uses (all figures are in metric tonnes per year)**

Party	Make-up or consumption	Maximum emissions
China	1 103	313
European Union	1 083	17
Israel	3.5	0
United States of America	2 300	181
<b>Total</b>	<b>4 489.5</b>	<b>511</b>

### **XXIII/8: Investigation of carbon tetrachloride discrepancy**

*Taking note* of the report from the Technology and Economic Assessment Panel and the Scientific Assessment Panel indicating the existence of a discrepancy between the emissions derived from reported production and consumption data from both parties operating under paragraph 1 of Article 5 and those not so operating and those inferred from atmospheric measurements,

*Noting* that the Technology and Economic Assessment Panel is continuing its work and will provide information as called for in decision XXI/8 relating to carbon tetrachloride,

1. To request the Technology and Economic Assessment Panel, in cooperation with the Scientific Assessment Panel, to continue to investigate the possible reasons for the identified discrepancy, considering in particular the extent to which the discrepancy could be due to:

- (a) Incomplete or inaccurate historical reporting of carbon tetrachloride produced;
- (b) Uncertainties in the atmospheric lifetime of carbon tetrachloride;
- (c) Carbon tetrachloride from unreported or underestimated sources from both parties operating under paragraph 1 of Article 5 and those not so operating;

2. To request the Technology and Economic Assessment Panel to report on its work in response to paragraph 1 above to the Twenty-Fourth Meeting of the Parties;

### **XXIII/9: Additional information on alternatives to ozone-depleting substances**

To request the Technology and Economic Assessment Panel to prepare a report in consultation with the other scientific experts, if necessary, for consideration by the Open-ended Working Group at its thirty-second meeting containing information on, among other things:

- (a) The cost of alternatives to hydrochlorofluorocarbons that are technically proven, economically viable and environmentally benign;
- (b) Alternatives to hydrochlorofluorocarbons that are technically proven, economically viable, environmentally benign and suitable for use in high ambient temperatures, including how such temperatures may affect efficiency or other factors;
- (c) Quantities and types of alternatives already and projected to be phased in as replacements for hydrochlorofluorocarbons, disaggregated by application, both in parties operating under paragraph 1 of Article 5 of the Montreal Protocol and parties not so operating;

(d) An assessment of the technical, economic and environmental feasibility of options in consultation with scientific experts;

### **XXIII/10: Updating the nomination and operational processes of the Technology and Economic Assessment Panel and its subsidiary bodies**

*Recalling* the terms of reference for the Technology and Economic Assessment Panel set forth in decision VIII/19 and amended by decision XVIII/19,

*Recalling also* decision VII/34 on the organization and functioning of the Technology and Economic Assessment Panel and specifically on efforts to increase the participation of experts from parties operating under paragraph 1 of Article 5 (Article 5 parties) and to improve geographical expertise and balance,

*Recalling* in particular section 2.1 of the terms of reference of the Technology and Economic Assessment Panel on the size and balance of the Panel, and the need to promote a membership that balances geography and expertise, including the overall goal of achieving a representation of about 50 per cent for experts from Article 5 parties in the Panel and its technical options committees,

*Recognizing* the need for the process and criteria for the appointment of experts to the Panel to be transparent and equitable,

*Recalling* sections 2.2 and 2.3 of the terms of reference of the Technology and Economic Assessment Panel, on nominations to the Panel and appointment of members to the Panel, and specifically the provision that any nominations made by the Panel are to be communicated to the relevant party for consultation before recommendations for appointment are made,

*Recognizing* the need for parties to receive from the Panel advice of the highest quality and to ensure that changes to the nomination process do not have an adverse effect on the expertise of the Panel or the quality of its advice,

*Taking note* of the information provided by the Panel in its 2011 progress report, in particular in response to decision XXII/22,

1. To request the Panel to compose its technical options committees and its temporary subsidiary bodies to reflect a balance of appropriate expertise so that their reports and information are comprehensive, objective, and policy neutral and to provide a description in reports by temporary subsidiary bodies on how their composition was determined;

2. To request the Panel to update its matrix of needed capabilities calling for expertise on the Panel, its technical options committees and its temporary subsidiary bodies twice a year and to publish the matrix on the Secretariat website and in the Panel's annual progress reports; this matrix should include the need for geographic and expertise balance;

3. Also to request the Panel to ensure that the information in the matrix is clear and sufficient to allow a full understanding of needed expertise and that information on the nomination process, the selection process, the Panel's terms of reference and the operation of the Panel and its subsidiary bodies is published on the Secretariat website in an easily accessible format;

4. Further to request the Panel to standardize the information required from potential experts for all nominations to the Panel, its technical options committees and its temporary subsidiary bodies in line with section 9.5.4 of the 2011 progress report, and to prepare a draft nomination form for consideration by the Open-ended Working Group at its thirty-second meeting;

5. To request the Panel to ensure that all nominations for appointments to the Panel, including co-chairs of the technical options committee, are agreed to by the national focal points of the relevant party;

6. To request the Panel to ensure that all nominations to its technical options committees and its temporary subsidiary bodies have been made in full consultation with the national focal points of the relevant party;

7. That all appointments to the Panel, and its technical options committees, including those of co-chairs, should be for a period of no more than four years;

8. That members of the Panel or of the technical options committee may be re-nominated for additional periods of up to four years each;

9. That the terms of all the members of the Panel and its technical options committees shall otherwise expire at the end of 2013 and 2014, respectively, in the absence of reappointment by the parties prior to that time, except for those experts that have already been nominated for four-year periods in past decisions;
10. That parties may revisit the status of the Panel and its technical options committee membership at the Twenty-Fifth and Twenty-Sixth Meetings of the Parties respectively if more time is needed by the parties to submit nominations;
11. To invite the parties having co-chairs and members currently serving on the Panel and its technical options committees to submit re-nominations for those experts in line with paragraphs 7, 8 and 9 of the present decision for consideration at the Twenty-Fifth and Twenty-Sixth Meetings of the Parties respectively;
12. That a decision of the parties is required to confirm any re-appointment to the Panel;
13. That a decision of the parties is required to confirm any temporary subsidiary body that exists for a period of more than one year;
14. That the parties should confirm, every four years, beginning in 2012, the list of technical options committees needed to meet the parties' requirements;
15. That the Ozone Secretariat should attend the meetings of the Panel whenever possible and appropriate to provide ongoing institutional advice on administrative issues when necessary;
16. To request the Panel to ensure that all new technical options committee members are properly informed of the Panel's terms of reference, its code of conduct contained in the Panel's terms of reference, relevant decisions of the parties and Panel operational procedures and are requested to abide by that guidance;
17. To request the Panel to revise its draft guidelines on recusal, taking into account similar guidelines in other multilateral forums, and provide them to the Open-ended Working Group at its thirty-second meeting for consideration by the parties;
18. To request the Panel to prepare guidelines, for the appointment of the co-chairs of the Panel and to provide them to Open-ended Working Group at its thirty-second meeting for consideration by the parties;
19. To request the Panel to consider the number of members of each of its subsidiary bodies to ensure that their membership is consistent with each of the subsidiary bodies' workload and to propose revision to their numbers to the Open-ended Working Group at its thirty-second meeting for the consideration of the parties, taking into account the need for geographical balance in accordance with decision VII/34;
20. To request the Panel to update its terms of reference in accordance with this decision and submit it to the Open-ended Working Group at its thirty-second meeting for consideration by the parties;
21. To request the Technology and Economic Assessment Panel not to apply the guidelines mentioned in paragraphs 17 and 18 until they are approved by the parties;

### **XXIII/11: Montreal Protocol treatment of ozone-depleting substances used to service ships, including ships from other flag states**

*Taking into account* that Article 4B of the Montreal Protocol on Substances that Deplete the Ozone Layer requires parties to establish and implement systems for licensing imports and exports to phase out the production and consumption of Annex A, B, C, and E ozone-depleting substances,

*Taking into account also* that consumption is defined under the Montreal Protocol as production plus imports minus exports,

*Recognizing* that ships use equipment and technologies containing ozone-depleting substances onboard during operations in national and international waterways,

*Mindful* that many parties registered as flag States are unsure of the reporting requirements for ships under the Montreal Protocol,

*Concerned* that differing party interpretations of the Montreal Protocol with regard to the sale of ozone depleting-substances to ships may result in the miscalculation of consumption or disparities in the reporting of consumption,

1. To request the Ozone Secretariat to prepare a document that collects current information about the sale of ozone-depleting-substances to ships, including ships from other flag States, for onboard servicing and other onboard uses, including on how parties calculate consumption with regard to such sales, and that identifies issues relevant to the treatment of the consumption of ozone-depleting substances used to service ships, including flag ships, for onboard uses for submission to the Open-ended Working Group at its thirty-second meeting to enable the Twenty-Fourth Meeting of the Parties to take a decision on the matter;

2. To include in the document any guidance and/or information on ozone-depleting-substances previously provided to the parties regarding sales to ships for onboard uses;

3. To request the Ozone Secretariat in preparing the document referred to in paragraph 1 to consult as deemed necessary with relevant international bodies, in particular the International Maritime Organization and the World Customs Organization, to include in the document information on whether and how those bodies address:

- (a) Trade in ozone-depleting substances for use onboard ships;
- (b) Use of ozone-depleting substances onboard ships;

and to provide a general overview on the framework applied by those bodies to manage relevant activities;

4. To request that the document be made available to all parties at least six weeks before the thirty-second meeting of the Open-ended Working Group;

5. To request parties to provide to the Ozone Secretariat, by 1 April 2012, information on the current system used by the parties, if any, to regulate and report on ozone-depleting substances supplied for the purpose of servicing ships, including ships from other flag States, for onboard use, on how they calculate consumption with regard to such ozone-depleting substances, and on any relevant cases in which they have supplied, imported or exported such ozone-depleting substances;

6. Requests the Secretariat to include the information provided pursuant to the preceding paragraph in an annex to the document called for in paragraph 1;

7. To request the Technology and Economic Assessment Panel to provide in its 2012 progress report a summary on the available data concerning the use of ozone-depleting substances on ships, including the quantities typically used on different types of ships, the estimated refrigerant bank on ships and an estimation of emissions;

8. To invite parties in a position to do so to provide, to the extent possible, relevant data concerning the use of ozone-depleting substances on ships, including the quantities typically used on different types of ships, the estimated refrigerant bank on ships and an estimation of emissions to the Panel by 1 March 2012;

## **XXIII/12: Adoption of new destruction technologies for ozone-depleting substances**

*Noting with appreciation* of the report of the task force established by the Technology and Economic Assessment Panel in response to decision XXII/10 on destruction technologies for ozone-depleting substances,

*Noting* that the task force recommends the addition of four technologies to the list of destruction processes approved by the parties and indicates that there is insufficient information to recommend one technology deemed to hold high potential,

1. To approve the highlighted destruction processes in the annex to the present decision for the purposes of paragraph 5 of Article 1 of the Montreal Protocol, as additions to the technologies listed in annex VI to the report of the Fourth Meeting of the Parties<sup>4</sup> and modified by decisions V/26, VII/35 and XIV/6;

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4 UNEP/OzL.Pro.4/15.



2. To request the Technology and Economic Assessment Panel to continue to assess the plasma destruction technology for methyl bromide in the light of any additional information that may become available and to report to the parties when appropriate;

3. Also to request the Technology and Economic Assessment Panel to continue to investigate the issues raised in its 2011 progress report regarding performance criteria for destruction and removal efficiency compared to destruction efficiency, and regarding verification criteria for the destruction of ozone-depleting substances at facilities that use approved destruction technologies, and to submit a final report to the Open-ended Working Group at its thirty-second meeting;

## Annex to decision XXIII/12

### Approved destruction processes

Technology	Applicability							
	Concentrated Sources							Dilute Sources
	Annex A		Annex B			Annex C	Annex E	
	Group 1	Group 2	Group 1	Group 2	Group 3	Group 1	Group 1	
Primary CFCs	Halons	Other CFCs	Carbon Tetrachloride	Methyl Chloroform	HCFCs	Methyl Bromide		
<b>Destruction &amp; Removal Efficiency (DRE)</b>	<b>99.99%</b>	<b>99.99%</b>	<b>99.99%</b>	<b>99.99%</b>	<b>99.99%</b>	<b>99.99%</b>	<b>99.99%</b>	<b>95%</b>
Argon Plasma Arc	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	
Cement Kilns	Approved	Not Approved	Approved	Approved	Approved	Approved	Not Determined	
<b>Chemical Reaction with H<sub>2</sub> and CO<sub>2</sub></b>	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	
Gas Phase Catalytic De-halogenation	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
Gaseous/Fume Oxidation	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
Inductively coupled radio frequency plasma	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	
Liquid Injection Incineration	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	
Microwave Plasma	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
Municipal Solid Waste Incineration								Approved
Nitrogen Plasma Arc	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
<b>Porous Thermal Reactor</b>	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
<b>Portable Plasma Arc</b>	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
Reactor Cracking	Approved	Not Approved	Approved	Approved	Approved	Approved	Not Determined	
Rotary Kiln Incineration	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	Approved
Superheated steam reactor	Approved	Not Determined	Approved	Approved	Approved	Approved	Not Determined	
<b>Thermal Reaction with Methane</b>	Approved	Approved	Approved	Approved	Approved	Approved	Not Determined	

### **XXIII/13: Potential areas of focus for the 2014 quadrennial reports of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel**

1. To note with appreciation the excellent and highly useful work of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel and their colleagues worldwide in preparing their 2010 assessment reports, including the 2011 synthesis report;
2. To request the three assessment panels to update their 2010 reports in 2014 and submit them to the Secretariat by 31 December 2014 for consideration by the Open-ended Working Group and by the Twenty-Seventh Meeting of the Parties in 2015;
3. That for its 2014 report, the Environmental Effects Assessment Panel should consider the most recent scientific information regarding effects on human health and the environment of changes in the ozone layer and in ultraviolet radiation, including:
  - (a) Effects of ultraviolet radiation reaching the biosphere and how those effects relate to physical, biological and environmental processes;
  - (b) Adverse effects of ultraviolet radiation on human health, including cancers, eye damage, infectious and other diseases and the beneficial effects of ultraviolet radiation;
  - (c) Effects on the biodiversity and functioning of ecosystems, including the delivery of ecosystem services such as food production;
  - (d) Effects of ultraviolet radiation on materials, including materials used in building construction;
  - (e) Risks to human health and the environment from substances that affect the ozone layer;
4. That the 2014 report of the Scientific Assessment Panel should include:
  - (a) Assessment of the state of the ozone layer and its future evolution, including in respect of atmospheric changes from, for example, sudden stratospheric warming or accelerated Brewer-Dobson circulation;
  - (b) Evaluation of the Antarctic ozone hole and Arctic winter/spring ozone depletion and the predicted changes in these phenomena, with a particular focus on temperatures in the polar stratosphere;
  - (c) Evaluation of trends in the concentration in the atmosphere of ozone-depleting substances and their consistency with reported production and consumption of those substances and the likely implications for the state of the ozone layer and the atmosphere;
  - (d) Assessment of the interaction between the ozone layer and the atmosphere; including:
    - (i) The effect of polar ozone depletion on tropospheric climate;
    - (ii) The effects of atmosphere-ocean coupling;
  - (e) Description and interpretation of observed ozone changes and ultraviolet radiation, along with future projections and scenarios for those variables, taking into account among other things the expected impacts to the atmosphere;
  - (f) Assessment of the effects of ozone-depleting substances and other ozone-relevant substances, if any, with stratospheric influences, and their degradation products, the identification of such substances, their ozone-depletion potential and other properties;
  - (g) Identification of any other threats to the ozone layer;
5. That in its 2014 report the Technology and Economic Assessment Panel should consider the following topics:
  - (a) Technical progress in all consumption sectors and destruction of ozone-depleting substances;

- (b) Accounting for production and consumption for the various applications of ozone-depleting substances;
- (c) Technically and economically feasible alternatives to ozone-depleting substances, in consumption sectors taking into account their overall performance;
- (d) Status of banks containing ozone-depleting substances, including those maintained for essential and critical uses, and the options available for handling them;
- (e) Challenges facing parties operating under paragraph 1 of Article 5 of the Montreal Protocol in phasing out remaining ozone-depleting substances such as methyl bromide and maintaining the phase-outs already achieved;

### **XXIII/14: Key challenges facing methyl bromide phase-out in parties operating under paragraph 1 of Article 5**

*Noting* that the report of the Technology and Economic Assessment Panel's task force on the 2012–2014 replenishment does not include a funding requirement for methyl bromide phase-out activities in Africa for the triennium 2012–2014, since all of the eligible funding for the region has already been approved,

*Aware* that methyl bromide is the only ozone-depleting substance directly connected to food security (production and post-harvest applications), and that its phase-out could easily be reversed,

*Considering* that it is necessary to continue to use chemical and non-chemical alternatives, and that the efficacy of those alternatives in the short term, medium term and long term should be taken into consideration,

*Noting with concern* that some applications of methyl bromide, such as the treatment of high-moisture fresh dates, still lack alternatives,

*Aware* that methyl bromide consumption, particularly in the quarantine and pre-shipment sector, is increasing in many parties operating under paragraph 1 of Article 5 of the Montreal Protocol,

*Acknowledging* that some African countries report that there is strong pressure to return to methyl bromide use as a result of the non-sustainability of alternatives, both in terms of availability and cost,

*Noting* that some African countries further report that certain chemical and non-chemical alternatives that have been adopted to replace methyl bromide in Africa have been unsustainable for various technical, economic and/or regulatory reasons,

*Aware* that some chemical alternatives that have been adopted and are relied upon are being or will be banned completely in the future, *Concerned* that the application of some chemical alternatives is complicated and not cost-effective,

*Recalling* that methyl bromide is used in Africa to protect crops, which are considered to be the backbone of the economies of many parties operating under paragraph 1 of Article 5,

*Mindful* that the Methyl Bromide Technical Options Committee pointed out in its May 2011 progress report that parties operating under paragraph 1 of Article 5 might wish to submit critical-use nominations for the remaining uses of methyl bromide that they consider appropriate for 2015 and possibly thereafter,

*Taking into consideration* the difficult and complex technical process involved in submitting critical-use nominations,

1. To request the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol to consider requesting its Senior Monitoring and Evaluation Officer, when carrying out the evaluation approved at its sixty-fifth meeting on methyl bromide projects in Africa, to consider options for a strategy to achieve the sustainable use of effective alternatives to methyl bromide in Africa;

2. To request the Technology and Economic Assessment Panel, in view of its May 2011 progress report, to consider whether the guidelines and criteria for the preparation of critical-use nominations of methyl bromide need any modification to take into account the situation of parties operating under paragraph 1 of Article 5 and to report on this issue to the Open-ended Working Group at its thirty-third meeting;

### **XXIII/15: 2012–2014 replenishment of the Multilateral Fund**

1. To adopt a budget for the Multilateral Fund for the Implementation of the Montreal Protocol for 2012–2014 of \$450,000,000 on the understanding that \$34,900,000 of that budget will be provided from anticipated contributions due to the Multilateral Fund and other sources for the 2009–2011 triennium, and that \$15,100,000 will be provided from interest accruing to the Fund during the 2012–2014 triennium. The parties note that outstanding contributions from some parties with economies in transition in the period 2009–2011 stand at \$5,924,635;

2. To adopt the scale of contributions for the Multilateral Fund based on a replenishment of \$133,333,334 for 2012, \$133,333,333 for 2013, and \$133,333,333 for 2014 as it appears in annex III to the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-third Meeting of the Parties to the Montreal Protocol;<sup>5</sup>

3. That the Executive Committee should take action to ensure, as far as possible, that the whole of the budget for 2012–2014 is committed by the end of 2014, and that parties not operating under paragraph 1 of Article 5 should make timely payments in accordance with paragraph 7 of decision XI/6;

### **XXIII/16: Extension of the fixed-exchange-rate mechanism to the 2012–2014 replenishment of the Multilateral Fund**

1. To direct the Treasurer to extend the fixed-exchange-rate mechanism to the period 2012–2014;

2. That parties choosing to pay their contributions to the Multilateral Fund for the Implementation of the Montreal Protocol in national currencies will calculate their contributions based on the average United Nations exchange rate for the six-month period commencing 1 January 2011;

3. That, subject to paragraph 4 below, parties not choosing to pay in national currencies pursuant to the fixed-exchange-rate mechanism will continue to pay in United States dollars;

4. That no party should change the currency selected for its contribution in the course of the triennium 2012–2014;

5. That only parties with inflation rate fluctuations of less than 10 per cent, as per published figures of the International Monetary Fund, for the preceding triennium will be eligible to use the fixed-exchange-rate mechanism;

6. To urge parties to pay their contributions to the Multilateral Fund in full and as early as possible in accordance with paragraph 7 of decision XI/6;

7. To agree that if the fixed-exchange-rate mechanism is to be used for the replenishment period 2015–2017 parties choosing to pay their contributions in national currencies will calculate their contributions based on the average United Nations exchange rate for the six-month period commencing 1 January 2014;

### **XXIII/17: Administrative and financial matters: financial reports and budgets**

*Recalling* decision XXII/21 on financial matters,

*Taking note* of the financial report on the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer for the biennium 2010–2011, ended 31 December 2010,

*Recognizing* that voluntary contributions are an essential complement for the effective implementation of the Montreal Protocol,

*Welcoming* the continued efficient management by the Secretariat of the finances of the Montreal Protocol Trust Fund,

1. To approve the 2012 budget in the amount of \$4,949,012 United States dollars and to take note of the proposed budget of \$4,896,659 for 2013, as set out in annex IV to the report of the

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5 Ibid.

ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol;<sup>6</sup>

2. To authorize the Secretariat to draw down \$672,079 in 2012 and to note the proposed drawdown of \$619,726 in 2013;

3. To approve, as a consequence of the drawdowns referred to in paragraph 2 above, total contributions to be paid by the parties of \$4,276,933 for 2012 and to note the contributions of \$4,276,933 for 2013, as set out in annex V to the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol;

4. That the contributions of individual parties for 2012 shall be listed in annex IV to the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties;

5. To authorize the Secretariat to maintain the operating cash reserve at 15 per cent of the 2012 budget to be used to meet the final expenditures under the Trust Fund;

6. To encourage parties, non-parties and other stakeholders to contribute financially and with other means to assist members of the three assessment panels and their subsidiary bodies with their continued participation in the assessment activities under the Protocol;

7. To urge all parties to pay both their outstanding contributions and their future contributions promptly and in full;

### **XXIII/18: Membership of the Implementation Committee**

1. To note with appreciation the work carried out by the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol in 2011;

2. To confirm the positions of Armenia, Germany, Guinea (replacing Algeria), Nicaragua and Sri Lanka as members of the Committee for one further year and to select Lebanon, Poland, Saint Lucia, the United States of America and Zambia as members of the Committee for a two-year period beginning on 1 January 2012;

3. To note the selection of Mr. W. L. Sumathipala (Sri Lanka) to serve as President and of Mr. Janusz Kozakiewicz (Poland) to serve as Vice-President and Rapporteur of the Committee for one year beginning on 1 January 2012;

### **XXIII/19: Membership of the Executive Committee of the Multilateral Fund**

1. To note with appreciation the work carried out by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol with the assistance of the Fund secretariat in 2011;

2. To endorse the selection of Belgium, Canada, Finland, Japan, Romania, United Kingdom of Great Britain and Northern Ireland and United States of America as members of the Executive Committee representing parties not operating under paragraph 1 of Article 5 of the Protocol and the selection of Argentina, China, Cuba, India, Kenya, Jordan and Mali as members representing parties operating under that paragraph, for one year beginning 1 January 2012;

3. To note the selection of Mr. Xiao Xuezhi (China) to serve as Chair and Ms. Fiona Walters (United Kingdom) to serve as Vice-Chair of the Executive Committee for one year beginning 1 January 2012;

### **XXIII/20: Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol**

To endorse the selection of Mr. Ghazi Odat (Jordan) and Ms. Gudi Alkemade (Netherlands) as Co-Chairs of the Open-ended Working Group of the Parties to the Montreal Protocol in 2012;

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6 Ibid.

### **XXIII/21: Endorsement of a new co-chair of the Chemicals Technical Options Committee and a senior expert of the Technology and Economic Assessment Panel**

1. To thank Mr. Masaaki Yamabe (Japan) for his long and outstanding efforts on behalf of the Montreal Protocol on Substances that Deplete the Ozone Layer as co-chair of the Chemicals Technical Options Committee;
2. To endorse Mr. Yamabe (Japan) as a senior expert of the Technology and Economic Assessment Panel for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;
3. To endorse Mr. Keiichi Ohnishi (Japan), a member of the Chemicals Technical Options Committee, as a new co-chair of the Chemicals Technical Options Committee for a term of four years, subject to re-endorsement by the parties in accordance with section 2.3 of the terms of reference of the Technology and Economic Assessment Panel;

### **XXIII/22: Data and information provided by the parties in accordance with Article 7 of the Montreal Protocol**

*Noting with appreciation* that 192 parties of the 196 that should have reported data for 2010 have done so and that 92 of those parties reported their data by 30 June 2011 in accordance with decision XV/15,

*Noting with concern*, however, that the following parties have not reported 2010 data: Libya, Liechtenstein, Peru and Yemen,

*Noting* that their failure to report their 2010 data in accordance with Article 7 places those parties in non-compliance with their data-reporting obligations under the Montreal Protocol until such time as the Secretariat receives their outstanding data,

*Noting also* that a lack of timely data reporting by parties impedes effective monitoring and assessment of parties' compliance with their obligations under the Montreal Protocol,

*Noting further* that reporting by 30 June each year greatly facilitates the work of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol in assisting parties operating under paragraph 1 of Article 5 of the Protocol to comply with the Protocol's control measures,

1. To urge the parties listed in the present decision to work closely with the implementing agencies, where appropriate, and report the required data to the Secretariat as a matter of urgency;
2. To request the Implementation Committee to review the situation of those parties at its forty-eighth meeting;
3. To encourage parties to continue to report consumption and production data as soon as figures are available, and preferably by 30 June each year, as agreed in decision XV/15;

### **XXIII/23: Potential non-compliance in 2009 with the provisions on consumption of the controlled substances in Annex A, group II (halons), by Libya and request for a plan of action**

*Noting* that Libya ratified the Montreal Protocol on Substances that Deplete the Ozone Layer on 11 July 1990, the London Amendment on 12 July 2001 and the Copenhagen Amendment on 24 September 2004 and is classified as a party operating under paragraph 1 of Article 5 of the Protocol,

*Noting also* that the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol has approved \$7,627,354 from the Multilateral Fund in accordance with Article 10 of the Protocol to enable Libya to achieve compliance with the Protocol,

*Noting further* that Libya has reported annual consumption for the controlled substances in Annex A, group II (halons), for 2009 of 1.8 ODP-tonnes, which exceeds the party's maximum allowable consumption of zero ODP-tonnes for that controlled substance for that year, and that in the absence of further clarification, Libya is therefore presumed to be in non-compliance with the control measures under the Protocol,

1. To request Libya to submit to the Secretariat, as a matter of urgency and no later than 31 March 2012, for consideration by the Implementation Committee at its forty-eighth meeting an explanation for its excess consumption of halons, together with a plan of action with time-specific benchmarks to ensure the party's prompt return to compliance;
2. To monitor closely Libya's progress with regard to the phase-out of halons: to the degree that the party is working towards and meeting the specific Protocol control measures, it should continue to be treated in the same manner as a party in good standing and, in that regard, Libya should continue to receive international assistance to enable it to meet its commitments in accordance with item A of the indicative list of measures that may be taken by the Meeting of the Parties in respect of non-compliance;
3. To caution Libya, in accordance with item B of the indicative list of measures, that in the event that it fails to return to compliance in a timely manner the Meeting of the Parties will consider measures consistent with item C of the indicative list of measures, which may include the possibility of actions available under Article 4, such as ensuring that the supply of halons that is the subject of non-compliance is ceased so that exporting parties are not contributing to a continuing situation of non-compliance;

### **XXIII/24: Difficulties faced by Iraq as a new party**

*Noting with appreciation* Iraq's efforts to comply with the requirements of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol and all its amendments,

*Recognizing* the continued difficulties faced by Iraq as the result of its becoming a party to the Vienna Convention and the Montreal Protocol and all its amendments shortly before key phase-out dates,

*Recognizing also* the security situation and the political, economic and social difficulties faced by Iraq over the past two decades,

*Acknowledging* Iraq's commitment to phasing out ozone-depleting substances under the Montreal Protocol and its amendments within a limited time frame,

1. To urge all exporting countries to liaise with the Government of Iraq, as feasible, prior to the export of any ozone-depleting substances to Iraq in order to support the local authorities in controlling the import of ozone-depleting substances and combating illegal trade;
2. To note the need for extra security and attention to logistical difficulties in the implementation of phase-out projects in Iraq, including resources adequate to enable implementing agency personnel to operate in the country;
3. To request the implementing agencies to continue to take into account Iraq's special situation and to provide it with appropriate assistance;

### **XXIII/25: Non-reporting of 2009 data on hydrochlorofluorocarbons by Yemen in accordance with Article 7 of the Montreal Protocol**

*Noting with appreciation* that Yemen in October 2010 reported all its data for 2009 except for data concerning the controlled substances in Annex C, group I (hydrochlorofluorocarbons),

*Noting* that the non-reporting of hydrochlorofluorocarbon data places Yemen in non-compliance with its reporting obligations under paragraph 3 of Article 7 of the Montreal Protocol,

*Noting also* the party's explanation at the time of reporting in October 2010 that it had delayed reporting its hydrochlorofluorocarbon data because survey activities for the preparation of its hydrochlorofluorocarbon phase-out management plan were continuing and that it intended to report the data upon completion of those activities,

*Noting with concern* the lack of response from Yemen to subsequent communications from the Secretariat,

*Noting* that according to the United Nations Environment Programme, in its role as an implementing agency operating in the party, Yemen had completed the collection of data but had yet to verify it,



*Recognizing* the security situation and the political and social difficulties faced by Yemen in recent months,

1. To urge Yemen to work closely with the implementing agencies to report the required data to the Secretariat as a matter of urgency;
2. To request the Implementation Committee to review the situation of Yemen at its forty-eighth meeting;

### **XXIII/26: Non-compliance with the Montreal Protocol by the European Union**

*Noting* that the European Union reported the export of 16.616 metric tonnes of Annex C, group I, controlled substances (hydrochlorofluorocarbons) in 2009 to a State classified as not operating under paragraph 1 of Article 5 of the Montreal Protocol that was also a State not party to the Copenhagen Amendment to the Protocol in that year, which places the party in non-compliance with the provisions of Article 4 of the Protocol prohibiting trade with any State not party to the Protocol,

1. That no further action is necessary in view of the party's implementation of regulatory and administrative measures to ensure its compliance with the provisions of the Protocol governing trade with non-parties;
2. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

### **XXIII/27: Non-compliance with the Montreal Protocol by the Russian Federation**

*Noting* that the Russian Federation reported the export of 70.2 metric tonnes of Annex C, group I, controlled substances (hydrochlorofluorocarbons) in 2009 to a State classified as not operating under paragraph 1 of Article 5 of the Montreal Protocol that was also a State not party to the Copenhagen Amendment or the Beijing Amendment to the Protocol in that year, which places the Russian Federation in non-compliance with the provisions of Article 4 of the Protocol prohibiting trade with any State not party to the Protocol,

1. That no further action is necessary in view of the party's implementation of regulatory and administrative measures to ensure its compliance with the provisions of the Protocol governing trade with non-parties;
2. To monitor closely the party's progress with regard to the implementation of its obligations under the Montreal Protocol;

### **XXIII/28: Request by Tajikistan for the revision of its baseline data**

*Noting* that Tajikistan has submitted a request for the revision of its consumption data for the Annex C, group I, controlled substances (hydrochlorofluorocarbons) for the baseline year 1989 from 6.0 ODP-tonnes to 18.7 ODP-tonnes,

*Noting also* that decision XV/19 sets out the methodology for the submission and review of requests for the revision of baseline data,

*Noting with appreciation* the efforts by Tajikistan to fulfil the information requirements of decision XV/19, in particular its efforts to verify the accuracy of its proposed new baseline data through a national survey of hydrochlorofluorocarbon use carried out with the assistance of the United Nations Development Programme and funding from the Global Environment Facility,

1. That Tajikistan has presented sufficient information, in accordance with decision XV/19, to justify its request for the revision of its baseline consumption data for hydrochlorofluorocarbons;
2. To revise the baseline consumption data of Tajikistan for hydrochlorofluorocarbons for the year 1989 from 6.0 ODP-tonnes to 18.7 ODP-tonnes;

## **XXIII/29: Requests for the revision of baseline data by Barbados, Bosnia and Herzegovina, Brunei Darussalam, Guyana, Lao People’s Democratic Republic, Lesotho, Palau, Solomon Islands, Swaziland, Togo, Tonga, Vanuatu and Zimbabwe**

*Noting* that, in accordance with decision XIII/15, by which the Thirteenth Meeting of the Parties decided that parties requesting the revision of reported baseline data should present such requests to the Implementation Committee, which in turn would work with the Secretariat and the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol to confirm the justification for the changes and present them to the Meeting of the Parties for approval,

*Noting also* that decision XV/19 sets out the methodology for the submission of such requests,

1. That Barbados, Bosnia and Herzegovina, Brunei Darussalam, Guyana, Lao People’s Democratic Republic, Lesotho, Palau, Solomon Islands, Swaziland, Togo, Tonga, Vanuatu and Zimbabwe have presented sufficient information, in accordance with decision XV/19, to justify their requests for the revision of their consumption data for the year 2009 for hydrochlorofluorocarbons, which is part of the baseline for parties operating under paragraph 1 of Article 5;

2. To approve the requests of the parties listed in the preceding paragraph and to revise their baseline hydrochlorofluorocarbon consumption data for the year 2009 as indicated in the following table:

<i>Party</i>	<i>Previous data</i>		<i>New data</i>	
	<i>Metric tonnes</i>	<i>ODP-tonnes</i>	<i>Metric tonnes</i>	<i>ODP-tonnes</i>
Barbados	82.68	4.5	91.43	5.1
Bosnia and Herzegovina	82.73	6.0	77.96	5.8
Brunei Darussalam	82.2	4.5	96.69	5.3
Guyana	16.822	0.9	19.271	1.1
Lao People’s Democratic Republic	22.03	1.2	39.09	2.1
Lesotho	187.0	10.3	68.271	3.8
Palau	2.04	0.1	2.56	0.1
Solomon Islands	28.28	1.6	29.09	1.6
Swaziland	99.9	9.2	103.72	9.5
Togo	372.89	20.5	350	19.3
Tonga	0.01	0.0	2.43	0.1
Vanuatu	1.46	0.1	1.89	0.1
Zimbabwe	225	12.4	303.47	17.1

## **XXIII/30: Decimal places to be used by the Secretariat in analysing and presenting hydrochlorofluorocarbon data for 2011 and later years**

*Recognizing* that for the past several years the Secretariat has been following the informal guidance set out in the report of the Eighteenth Meeting of the Parties<sup>7</sup> to round its data reported to the parties to one decimal place,

*Acknowledging* the low ozone-depletion potential of many Annex C, group I, controlled substances (hydrochlorofluorocarbons),

7 UNEP/OzL.Pro.18/10.

*Taking into consideration* the small quantities of hydrochlorofluorocarbons used by a significant number of parties operating under paragraph 1 of Article 5,

*Understanding* that, as a result of the low ozone-depletion potential of hydrochlorofluorocarbons, rounding to one decimal place could result in the continued use of a substantial amount of those substances,

*Wishing* to ensure that any change in the number of decimal places used to calculate baselines, consumption and production is forward looking and does not cause changes in previously submitted data,

To direct the Secretariat to use two decimal places when presenting and analysing for compliance hydrochlorofluorocarbon baselines established after the Twenty-Third Meeting of the Parties and annual hydrochlorofluorocarbon data reported under Article 7 for 2011 and later years;

### **XXIII/31: Status of the establishment of licensing systems under Article 4B of the Montreal Protocol**

*Noting* that paragraph 3 of Article 4B of the Montreal Protocol requires each party, within three months of the date of introducing its system for licensing the import and export of new, used, recycled and reclaimed controlled substances in Annexes A, B, C and E of the Protocol, to report to the Secretariat on the establishment and operation of that system,

*Noting with appreciation* that 182 of the 185 parties to the Montreal Amendment to the Protocol have established import and export licensing systems for ozone-depleting substances as required by the Amendment and that 174 of those parties have provided disaggregated information on their licensing systems detailing which annexes and groups of substances under the Montreal Protocol are subject to those systems,

*Noting also with appreciation* that 10 parties to the Protocol that have not yet ratified the Montreal Amendment have also established import and export licensing systems for ozone-depleting substances and that eight of those parties have provided disaggregated information on their licensing systems,

*Recognizing* that licensing systems provide for the monitoring of imports and exports of ozone-depleting substances, prevent illegal trade and enable data collection,

*Recognizing also* that the successful phase-out of most ozone-depleting substances by parties is largely attributable to the establishment and implementation of licensing systems to control the import and export of ozone-depleting substances,

1. To request Bolivia, the Democratic Republic of Korea, Dominica, Ecuador, Ghana, the Holy See, Tajikistan and Thailand, which are parties to the Montreal Amendment, and Guinea and Papua New Guinea, which are non-parties to the Montreal Amendment, none of which have yet provided disaggregated information on their licensing systems, to submit such information to the Secretariat as a matter of urgency, and no later than 31 March 2012, for consideration by the Committee at its forty-eighth meeting;

2. To urge Ethiopia, San Marino and Timor-Leste to complete the establishment and operation of licensing systems as soon as possible and to report to the Secretariat thereon no later than 31 March 2012;

3. To encourage Botswana, which is non-party to the Montreal Amendment to the Protocol and has not yet established a licensing system, to ratify the Amendment and to establish a licensing system to control imports and exports of ozone-depleting substances;

4. To urge Chad, Comoros, the Gambia, the Federated States of Micronesia, Solomon Islands, Sudan and Tonga, which operate licensing systems for ozone-depleting substances that do not include export controls, to ensure that they are structured in accordance with Article 4B of the Protocol and that they provide for the licensing of exports and to report thereon to the Secretariat;

5. To urge Honduras and Togo, whose licensing systems do not regulate substances in Annex C, Group I (hydrochlorofluorocarbons), to ensure that those systems include import and export controls for the above-mentioned substances and to report thereon to the Secretariat;

6. To review periodically the status of the establishment of import and export licensing systems for ozone-depleting substances by all parties to the Protocol, as called for in Article 4B of the Protocol;

### **XIII/32: Twenty-Fourth Meeting of the Parties to the Montreal Protocol**

To convene the Twenty-Fourth Meeting of the Parties to the Montreal Protocol in Geneva, Switzerland, from 12 to 16 November 2012 unless other appropriate arrangements are made by the Secretariat in consultation with the Bureau;

### **XIII/33: Twenty-Sixth Meeting of the Parties to the Montreal Protocol**

To convene the Twenty-Sixth Meeting of the Parties to the Montreal Protocol back to back with the tenth meeting of the Conference of the Parties to the Vienna Convention.

#### **Comments made at the time of adoption of decisions**

210. Following the adoption of the decisions by the Twenty-Third Meeting of the Parties, several representatives made comments in connection with the 2012–2014 replenishment of the Multilateral Fund. All the representatives who spoke emphasized that the negotiations had been very difficult, applauded the efforts of those who had facilitated the negotiations, thanked the other parties for their flexibility and willingness to compromise, and said that they were pleased that in keeping with the traditions of the Protocol consensus had been reached on the matter.

211. The representative of the United States, acknowledging the challenges faced by parties operating under paragraph one of Article 5 of the Protocol in meeting their 2013 and 2015 phase-out targets, pointed out that developed countries faced serious economic challenges. Those challenges notwithstanding, he said, his Government was committed to ensuring adequate replenishment funding, and pledged to work with all parties to make the Protocol work.

212. The representative of China expressed concern that the amount of the replenishment, the lowest to date, extended what had become a trend of shrinking replenishments and might be insufficient to support the accelerated phase-out of HCFCs. While not prepared to assert that it would lead to non-compliance, he suggested that there was a clear link between the risk of non-compliance and the amount of the replenishment and said that he hoped that donor countries would pay close attention in the future to the challenges involved in HCFC phase-out and show greater flexibility and support.

213. The representative of Canada emphasized the positive aspects of the outcome, noting that the parties had succeeded in reaching consensus in a difficult global context. He expressed confidence that, as in the past, the parties would continue to work together to ensure compliance.

214. The representative of Brazil spoke of his concern that the difficulty of the negotiations might have left parties operating under paragraph one of Article 5 with doubts about funding levels, which were not in line with the Technology and Economic Assessment Panel's recommendations on the matter. He said that there were many challenges ahead and that it was necessary to fund current obligations sufficiently before extending the scope of the Protocol to include new obligations. He urged the parties to focus on the Protocol's mandate so that the level of compliance action was consistent with the level of support provided.

215. Echoing the views of China and Brazil the representative of India called upon developed countries to demonstrate through action their appreciation for the commitment made by the developing world.

216. The representative of Germany said that, owing to the effect of national regulations, and as he had pointed out during the deliberations of the replenishment contact group, his country's consent to the decision on replenishment of the Multilateral Fund was contingent on the approval by Germany's parliament of the country's 2012 federal budget. He said that although that approval had not yet been secured he hoped that it would be in the very near future.

217. The representative of Austria said that his country recognized the replenishment decision as a good compromise that would help to achieve the objectives of the Protocol and therefore did not wish to stand in the way of consensus on the replenishment. That notwithstanding, he was constrained to report that his Government's budget for 2012 had already been adopted and did not include provision for Austria's increased contribution under the replenishment decision. Austria would make its utmost efforts to comply with the replenishment decision but was not currently in a position to secure the payment of its share of the replenishment.

**XI. Adoption of the report of the ninth meeting of the Conference of the Parties to the Vienna Convention and the Twenty-Third Meeting of the Parties to the Montreal Protocol**

218. The present report was adopted on Friday, 25 November 2011, on the basis of the draft report that had been circulated.

**XII. Closure of the meeting**

219. Following the customary exchange of courtesies, the meeting was declared closed at 11.20 p.m. on Friday, 25 November 2011.

## Annex I

**Trust fund for the Vienna Convention for the protection of the ozone layer:  
approved 2011 and 2012 and proposed 2013 and 2014 budgets (in United States dollars)**

			w/m	2011	w/m	2012	w/m	2013	w/m	2014
<b>10</b>	<b>Project personnel component</b>									
	<i>1100 Project personnel</i>									
	1101	Executive Secretary (D-2) (shared with the Montreal Protocol (MP))	6	142 811	6	142 811	6	142 811	6	142 811
	1104	Scientific Affairs Officer (P-5) (shared with MP)	6	106 925	6	106 925	6	106 925	6	106 925
	1105	Administrative Officer (P-5) (paid by UNEP)		0		0		0		0
	1107	Programme Officer (Communication and Information) (P-3)	12	132 306	12	140 306	12	144 515	12	148 850
	1199	Subtotal		382 042		390 042		394 251		398 586
	<i>1300 Administrative support</i>									
	1301	Administrative Assistant (G-7) (Shared with MP)	6	23 220	6	23 917	6	24 635	6	25 374
	1303	Programme Assistant (G-6)	12	25 488		25 488		25 488		25 488
	1304	Programme Assistant (G-6) (shared with MP)	6	19 931	6	20 529	6	21 145	6	21 779
	1305	Information Assistant (G-6) (Shared with MP)	6	18 482	6	19 036	6	19 607	6	20 195
	1310	Bilingual Senior Secretary (G-6)	12	25 367	12	25 367	12	25 367	12	25 367
	1322	Preparatory and parties meeting (shared with MP every 3 years, it applies to 2011 and 2014)		210 000		0		0		210 000
	1324	Meetings of the Bureau		20 000		0		0		20 000
	1326	Promotion of activities for the protection of the Ozone Layer		10 000		10 000		10 000		10 000
	1327	Meeting of the Ozone Research Managers		34 027		0		0		35 728
	1399	Subtotal		386 515		124 337		126 241		393 932

		w/m	2011	w/m	2012	w/m	2013	w/m	2014
1600	<i>Travel on official business</i>								
	1601	Staff travel on official business	30 000		30 000		30 000		30 000
	1699	Subtotal	30 000		30 000		30 000		30 000
<b>1999</b>	<b>Component total</b>		<b>798 557</b>		<b>544 379</b>		<b>550 493</b>		<b>822 518</b>
3300	<i>Participation costs of developing countries</i>								
	3302	Preparatory and parties meetings	0		0		0		0
	3304	Bureau meetings	20 000		0		0		20 000
	3307	Meeting of Ozone Research Managers	175 000		0		0		175 000
	3399	Subtotal	195 000		0		0		195 000
<b>3999</b>	<b>Component total</b>		<b>195 000</b>		<b>0</b>		<b>0</b>		<b>195 000</b>
<b>40</b>	<b>Equipment and premises component</b>								
4100	<i>Expendable equipment (items under \$1 500)</i>								
	4101	Miscellaneous expendables (shared with MP)	9 000		8 000		8 000		8 000
	4199	Subtotal	9 000		8 000		8 000		8 000
4200	<i>Non-expendable equipment</i>								
	4201	Personal computers and accessories	0		0		5 000		0
	4202	Portable computers	5 000		5 000		5 000		0
	4203	Other office equipment (server, fax, scanner, furniture, etc.)	5 000		5 000		5 000		5 000
	4204	Photocopiers	0		0		0		0
	4205	Paperless equipment and peripherals	0		5 000		5 000		5 000
	4299	Subtotal	10 000		15 000		20 000		10 000
4300	<i>Premises</i>								
		Rental of office premises (shared with MP)	17 500		17 500		17 500		17 500
	4301	Subtotal	17 500		17 500		17 500		17 500
<b>4999</b>	<b>Component total</b>		<b>36 500</b>		<b>40 500</b>		<b>45 500</b>		<b>35 500</b>
<b>50</b>	<b>Miscellaneous component</b>								
5100	<i>Operation and maintenance of equipment</i>								
	5101	Maintenance of equipment and other (shared with MP)	10 000		7 500		7 500		7 500

		w/m	2011	w/m	2012	w/m	2013	w/m	2014
5199	Subtotal		10 000		7 500		7 500		7 500
5200	<i>Reporting costs</i>								
	5201	Reporting	7 500		7 500		7 500		7 500
		Reporting (Ozone Research Managers meeting report)	15 000		0		0		15 000
	5202								
5299	Subtotal		22 500		7 500		7 500		22 500
5300	<i>Sundry</i>								
	5301	Communications	25 000		20 000		20 000		20 000
		Freight charges (documents)	20 000		15 000		15 000		15 000
	5302								
		Others (Ozone layer protection public awareness campaign)	5 000		5 000		5 000		5 000
	5304								
5399	Subtotal		50 000		40 000		40 000		40 000
5400	<i>Hospitality</i>								
	5401	Hospitality	10 000		0		0		10 000
5499	Subtotal		10 000		0		0		10 000
<b>5999</b>	<b>Component total</b>		<b>92 500</b>		<b>55 000</b>		<b>55 000</b>		<b>80 000</b>
<b>99</b>	<b>Total direct project cost</b>		<b>1 122 557</b>		<b>639 879</b>		<b>650 993</b>		<b>1 133 018</b>
	<b>Programme support costs (13%)</b>		<b>145 932</b>		<b>83 184</b>		<b>84 629</b>		<b>147 292</b>
	<b>Grand total (inclusive of programme support costs)</b>		<b>1 268 489</b>		<b>723 063</b>		<b>735 622</b>		<b>1 280 311</b>
	<b>Drawdown from Trust Fund balance*</b>		<b>665 489</b>		<b>120 063</b>		<b>132 622</b>		<b>677 311</b>
	<b>Contribution to be paid by the parties</b>		<b>603 000</b>		<b>603 000</b>		<b>603 000</b>		<b>603 000</b>



## Explanatory notes for the approved 2012, 2013 and 2014 budgets of the Trust Fund for the Vienna Convention for the Protection of the Ozone Layer

Budget line	Comment
Personnel component 1101, 1104 and 1107	Indicative Professional salary costs applicable to the relevant duty stations have been used for the budget proposals. Where information on actual staff costs is available, however, the figures have been adjusted accordingly. Unspent commitments normally revert to the Vienna Convention Trust Fund.
1105	The post of Administrative Officer continues to be paid from the 13 per cent programme support costs based on actual expenditures.
Administrative support/personnel 1301–1310	Standard General Service salary costs applicable to the Nairobi duty station have been used for the budget proposals.
Administrative support/conference services 1322, 1324, 1326, 1327	Necessary funds may be transferred from the conference servicing budget lines should such services be required to be rendered, either by individual consultancies or under corporate contracts.
	The current conference servicing costs have been based on the following reasons and assumptions:
	1322: The conferencing costs of the ninth and tenth meetings of the Conference of the Parties to the Vienna Convention are being shared with the Twenty-Third and Twenty-Sixth Meetings of the Parties to the Montreal Protocol as the meetings will be held jointly in 2011 and 2014;
	1324: Two Bureau meetings are scheduled for 2011 and 2014. The first meeting in the year is to be held back to back with the Ozone Research Managers' meeting and the second, back to back with the meeting of the Conference of the Parties. The meetings have provision for interpretation and document translation into the appropriate languages based on the membership of the Bureau;
	1326: A minimum amount is proposed for each year to cover activities in connection with the celebration of the International Day for the Protection of the Ozone Layer;
	1327: A small increase is included to cover conference costs related to the organization of the eighth and ninth Ozone Research Managers' meetings, in 2011 and 2014.

Travel on official business 1601	The budgets include travel of Secretariat officers in connection with the organization of the Ozone Research Managers' meetings and the meetings of the Conference of the Parties, in addition to travel related to provision of support to network and capacity-building meetings.
3302	<p>The participation of representatives of parties operating under paragraph 1 of Article 5 in the various Convention meetings is assumed at \$5,000 per representative per meeting taking into account not more than one person's travel costs per country, using the most appropriate and advantageous economy-class fare and United Nations daily subsistence allowances.</p> <p>Considering that the meeting of the Conference of the Parties to the Vienna Convention is normally held jointly with the Meeting of the Parties to the Montreal Protocol, the participation costs are borne by the Montreal Protocol.</p>
3304	The participation costs are based on two Bureau meetings respectively in 2011 and 2014 for four participants from developing countries or countries with economies in transition, being held back to back with the Ozone Research Managers' meeting and the meeting of the Conference of the Parties.
3307	One Ozone Research Managers' meeting was held in May 2011. The next meeting will be held in 2014. Funding has been reserved for participation by 35 experts from qualifying developing countries that submit national reports.
4201-4205	<p>The Secretariat is maintaining its electronic data processing systems to make the documentation of the Protocol and the Convention available electronically to the parties. This requires periodic procurement of necessary peripherals and software licenses, and also updating of the existing computer servers.</p> <p>A minimum provision has been made to enable the Secretariat to replace some equipment each year.</p>
5100-5400	Provisions under these budget lines contain minimal increase based on inflation rates recommended by the United Nations.

## Annex II

## Trust Fund for the Vienna Convention for the Protection of the Ozone Layer

Scale of contributions by the parties for 2012–2014 based on the United Nations scale of assessments  
(General Assembly resolution 64/248 of 24 December 2009 with a maximum assessment rate of 22 per cent)  
(in United States dollars)

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
1	Afghanistan	0.004	0.000	0.000	0	0	0
2	Albania	0.010	0.000	0.000	0	0	0
3	Algeria	0.128	0.128	0.128	771	771	771
4	Andorra	0.007	0.000	0.000	0	0	0
5	Angola	0.010	0.000	0.000	0	0	0
6	Antigua and Barbuda	0.002	0.000	0.000	0	0	0
7	Argentina	0.287	0.287	0.287	1 728	1 728	1 728
8	Armenia	0.005	0.000	0.000	0	0	0
9	Australia	1.933	1.933	1.930	11 637	11 637	11 637
10	Austria	0.851	0.851	0.850	5 123	5 123	5 123
11	Azerbaijan	0.015	0.000	0.000	0	0	0
12	Bahamas	0.018	0.000	0.000	0	0	0
13	Bahrain	0.039	0.000	0.000	0	0	0
14	Bangladesh	0.010	0.000	0.000	0	0	0
15	Barbados	0.008	0.000	0.000	0	0	0
16	Belarus	0.042	0.000	0.000	0	0	0
17	Belgium	1.075	1.075	1.073	6 472	6 472	6 472
18	Belize	0.001	0.000	0.000	0	0	0
19	Benin	0.003	0.000	0.000	0	0	0
20	Bhutan	0.001	0.000	0.000	0	0	0

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
21	Bolivia (Plurinational State of)	0.007	0.000	0.000	0	0	0
22	Bosnia and Herzegovina	0.014	0.000	0.000	0	0	0
23	Botswana	0.018	0.000	0.000	0	0	0
24	Brazil	1.611	1.611	1.608	9 698	9 698	9 698
25	Brunei Darussalam	0.028	0.000	0.000	0	0	0
26	Bulgaria	0.038	0.000	0.000	0	0	0
27	Burkina Faso	0.003	0.000	0.000	0	0	0
28	Burundi	0.001	0.000	0.000	0	0	0
29	Cambodia	0.003	0.000	0.000	0	0	0
30	Cameroon	0.011	0.000	0.000	0	0	0
31	Canada	3.207	3.207	3.202	19 306	19 306	19 306
32	Cape Verde	0.001	0.000	0.000	0	0	0
33	Central African Republic	0.001	0.000	0.000	0	0	0
34	Chad	0.002	0.000	0.000	0	0	0
35	Chile	0.236	0.236	0.236	1 421	1 421	1 421
36	China	3.189	3.189	3.184	19 198	19 198	19 198
37	Colombia	0.144	0.144	0.144	867	867	867
38	Comoros	0.001	0.000	0.000	0	0	0
39	Congo	0.003	0.000	0.000	0	0	0
40	Cook Islands	-	0.000	0.000	0	0	0
41	Costa Rica	0.034	0.000	0.000	0	0	0
42	Côte d'Ivoire	0.010	0.000	0.000	0	0	0
43	Croatia	0.097	0.000	0.000	0	0	0
44	Cuba	0.071	0.000	0.000	0	0	0
45	Cyprus	0.046	0.000	0.000	0	0	0
46	Czech Republic	0.349	0.349	0.348	2 101	2 101	2 101
47	Democratic People's Republic of Korea	0.007	0.000	0.000	0	0	0

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
48	Democratic Republic of the Congo	0.003	0.000	0.000	0	0	0
49	Denmark	0.736	0.736	0.735	4 431	4 431	4 431
50	Djibouti	0.001	0.000	0.000	0	0	0
51	Dominica	0.001	0.000	0.000	0	0	0
52	Dominican Republic	0.042	0.000	0.000	0	0	0
53	Ecuador	0.040	0.000	0.000	0	0	0
54	Egypt	0.094	0.000	0.000	0	0	0
55	El Salvador	0.019	0.000	0.000	0	0	0
56	Equatorial Guinea	0.008	0.000	0.000	0	0	0
57	Eritrea	0.001	0.000	0.000	0	0	0
58	Estonia	0.040	0.000	0.000	0	0	0
59	Ethiopia	0.008	0.000	0.000	0	0	0
60	European Union	2.500	2.500	2.496	15 050	15 050	15 050
61	Fiji	0.004	0.000	0.000	0	0	0
62	Finland	0.566	0.566	0.565	3 407	3 407	3 407
63	France	6.123	6.123	6.113	36 861	36 861	36 861
64	Gabon	0.014	0.000	0.000	0	0	0
65	Gambia	0.001	0.000	0.000	0	0	0
66	Georgia	0.006	0.000	0.000	0	0	0
67	Germany	8.018	8.018	8.005	48 269	48 269	48 269
68	Ghana	0.006	0.000	0.000	0	0	0
69	Greece	0.691	0.691	0.690	4 160	4 160	4 160
70	Grenada	0.001	0.000	0.000	0	0	0
71	Guatemala	0.028	0.000	0.000	0	0	0
72	Guinea	0.002	0.000	0.000	0	0	0
73	Guinea-Bissau	0.001	0.000	0.000	0	0	0

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
74	Guyana	0.001	0.000	0.000	0	0	0
75	Haiti	0.003	0.000	0.000	0	0	0
76	Holy See <sup>8</sup>	0.001	0.000	0.000	0	0	0
77	Honduras	0.008	0.000	0.000	0	0	0
78	Hungary	0.291	0.291	0.291	1 752	1 752	1 752
79	Iceland	0.042	0.000	0.000	0	0	0
80	India	0.534	0.534	0.533	3 215	3 215	3 215
81	Indonesia	0.238	0.238	0.238	1 433	1 433	1 433
82	Iran (Islamic Republic of)	0.233	0.233	0.233	1 403	1 403	1 403
83	Iraq	0.020	0.000	0.000	0	0	0
84	Ireland	0.498	0.498	0.497	2 998	2 998	2 998
85	Israel	0.384	0.384	0.383	2 312	2 312	2 312
86	Italy	4.999	4.999	4.991	30 094	30 094	30 094
87	Jamaica	0.014	0.000	0.000	0	0	0
88	Japan	12.530	12.530	12.509	75 431	75 431	75 431
89	Jordan	0.014	0.000	0.000	0	0	0
90	Kazakhstan	0.076	0.000	0.000	0	0	0
91	Kenya	0.012	0.000	0.000	0	0	0
92	Kiribati	0.001	0.000	0.000	0	0	0
93	Kuwait	0.263	0.263	0.263	1 583	1 583	1 583
94	Kyrgyzstan	0.001	0.000	0.000	0	0	0
95	Lao People's Democratic Republic	0.001	0.000	0.000	0	0	0
96	Latvia	0.038	0.000	0.000	0	0	0
97	Lebanon	0.033	0.000	0.000	0	0	0
98	Lesotho	0.001	0.000	0.000	0	0	0

8 Based on the notional assessment rate of 0.001 per cent as stipulated in General Assembly resolution 64/248 of 24 December 2009.

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
99	Liberia	0.001	0.000	0.000	0	0	0
100	Libya	0.129	0.129	0.129	777	777	777
101	Liechtenstein	0.009	0.000	0.000	0	0	0
102	Lithuania	0.065	0.000	0.000	0	0	0
103	Luxembourg	0.090	0.000	0.000	0	0	0
104	Madagascar	0.003	0.000	0.000	0	0	0
105	Malawi	0.001	0.000	0.000	0	0	0
106	Malaysia	0.253	0.253	0.253	1 523	1 523	1 523
107	Maldives	0.001	0.000	0.000	0	0	0
108	Mali	0.003	0.000	0.000	0	0	0
109	Malta	0.017	0.000	0.000	0	0	0
110	Marshall Islands	0.001	0.000	0.000	0	0	0
111	Mauritania	0.001	0.000	0.000	0	0	0
112	Mauritius	0.011	0.000	0.000	0	0	0
113	Mexico	2.356	2.356	2.352	14 183	14 183	14 183
114	Micronesia (Federated States of)	0.001	0.000	0.000	0	0	0
115	Monaco	0.003	0.000	0.000	0	0	0
116	Mongolia	0.002	0.000	0.000	0	0	0
117	Montenegro	0.004	0.000	0.000	0	0	0
118	Morocco	0.058	0.000	0.000	0	0	0
119	Mozambique	0.003	0.000	0.000	0	0	0
120	Myanmar	0.006	0.000	0.000	0	0	0
121	Namibia	0.008	0.000	0.000	0	0	0
122	Nauru	0.001	0.000	0.000	0	0	0
123	Nepal	0.006	0.000	0.000	0	0	0
124	Netherlands	1.855	1.855	1.852	11 167	11 167	11 167

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
125	New Zealand	0.273	0.273	0.273	1 643	1 643	1 643
126	Nicaragua	0.003	0.000	0.000	0	0	0
127	Niger	0.002	0.000	0.000	0	0	0
128	Nigeria	0.078	0.000	0.000	0	0	0
129	Niue	-	0.000	0.000	0	0	0
130	Norway	0.871	0.871	0.870	5 243	5 243	5 243
131	Oman	0.086	0.000	0.000	0	0	0
132	Pakistan	0.082	0.000	0.000	0	0	0
133	Palau	0.001	0.000	0.000	0	0	0
134	Panama	0.022	0.000	0.000	0	0	0
135	Papua New Guinea	0.002	0.000	0.000	0	0	0
136	Paraguay	0.007	0.000	0.000	0	0	0
137	Peru	0.090	0.000	0.000	0	0	0
138	Philippines	0.090	0.000	0.000	0	0	0
139	Poland	0.828	0.828	0.827	4 985	4 985	4 985
140	Portugal	0.511	0.511	0.510	3 076	3 076	3 076
141	Qatar	0.135	0.135	0.135	813	813	813
142	Republic of Korea	2.260	2.260	2.256	13 605	13 605	13 605
143	Republic of Moldova	0.002	0.000	0.000	0	0	0
144	Romania	0.177	0.177	0.177	1 066	1 066	1 066
145	Russian Federation	1.602	1.602	1.599	9 644	9 644	9 644
146	Rwanda	0.001	0.000	0.000	0	0	0
147	Saint Kitts and Nevis	0.001	0.000	0.000	0	0	0
148	Saint Lucia	0.001	0.000	0.000	0	0	0
149	Saint Vincent and the Grenadines	0.001	0.000	0.000	0	0	0
150	Samoa	0.001	0.000	0.000	0	0	0



	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
151	San Marino	0.003	0.000	0.000	0	0	0
152	Sao Tome and Principe	0.001	0.000	0.000	0	0	0
153	Saudi Arabia	0.830	0.830	0.829	4 997	4 997	4 997
154	Senegal	0.006	0.000	0.000	0	0	0
155	Serbia	0.037	0.000	0.000	0	0	0
156	Seychelles	0.002	0.000	0.000	0	0	0
157	Sierra Leone	0.001	0.000	0.000	0	0	0
158	Singapore	0.335	0.335	0.334	2 017	2 017	2 017
159	Slovakia	0.142	0.142	0.142	855	855	855
160	Slovenia	0.103	0.103	0.103	620	620	620
161	Solomon Islands	0.001	0.000	0.000	0	0	0
162	Somalia	0.001	0.000	0.000	0	0	0
163	South Africa	0.385	0.385	0.384	2 318	2 318	2 318
164	Spain	3.177	3.177	3.172	19 126	19 126	19 126
165	Sri Lanka	0.019	0.000	0.000	0	0	0
166	Sudan	0.010	0.000	0.000	0	0	0
167	Suriname	0.003	0.000	0.000	0	0	0
168	Swaziland	0.003	0.000	0.000	0	0	0
169	Sweden	1.064	1.064	1.062	6 405	6 405	6 405
170	Switzerland	1.130	1.130	1.128	6 803	6 803	6 803
171	Syrian Arab Republic	0.025	0.000	0.000	0	0	0
172	Tajikistan	0.002	0.000	0.000	0	0	0
173	Thailand	0.209	0.209	0.209	1 258	1 258	1 258
174	The former Yugoslav Republic of Macedonia	0.007	0.000	0.000	0	0	0
175	Timor-Leste	0.001	0.000	0.000	0	0	0
176	Togo	0.001	0.000	0.000	0	0	0
177	Tonga	0.001	0.000	0.000	0	0	0

	Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 contributions by parties	2013 contributions by parties	2014 contributions by parties
178	Trinidad and Tobago	0.044	0.000	0.000	0	0	0
179	Tunisia	0.030	0.000	0.000	0	0	0
180	Turkey	0.617	0.617	0.616	3 714	3 714	3 714
181	Turkmenistan	0.026	0.000	0.000	0	0	0
182	Tuvalu	0.001	0.000	0.000	0	0	0
183	Uganda	0.006	0.000	0.000	0	0	0
184	Ukraine	0.087	0.000	0.000	0	0	0
185	United Arab Emirates	0.391	0.391	0.390	2 354	2 354	2 354
186	United Kingdom of Great Britain and Northern Ireland	6.604	6.604	6.593	39 757	39 757	39 757
187	United Republic of Tanzania	0.008	0.000	0.000	0	0	0
188	United States of America	22.000	22.000	21.964	132 441	132 441	132 441
189	Uruguay	0.027	0.000	0.000	0	0	0
190	Uzbekistan	0.010	0.000	0.000	0	0	0
191	Vanuatu	0.001	0.000	0.000	0	0	0
192	Venezuela (Bolivarian Republic of)	0.314	0.314	0.313	1 890	1 890	1 890
193	Viet Nam	0.033	0.000	0.000	0	0	0
194	Yemen	0.010	0.000	0.000	0	0	0
195	Zambia	0.004	0.000	0.000	0	0	0
196	Zimbabwe	0.003	0.000	0.000	0	0	0
	<b>Total</b>	<b>102.501</b>	<b>100.165</b>	<b>100.000</b>	<b>603 000</b>	<b>603 000</b>	<b>603 000</b>

## Annex III

**Contributions by parties to the eighth replenishment of the Multilateral Fund (2012, 2013 and 2014)  
(replenishment at US\$ 450 million, including US\$ 400 million from new contributions)**

No.	Parties	United Nations scale of assessments for 2010–2012	Adjusted United Nations scale of assessments with no party contributing more than 22%	Annual contributions (in United States dollars) for years 2012, 2013 and 2014	Average inflation rate for the period 2009–2011	Qualifying for FERM Use Yes=1 No=0	FERM Users' currencies rates of exchange	FERM users' national currencies	FERM users' payments in national currencies
1	Andorra	0.007	0.008929886	11 906.51					0.00
2	Australia	1.933	2.465924145	3 287 898.86	2.56%	1	0.967	Australian dollar	3 179 398.20
3	Austria	0.851	1.085618959	1 447 491.95	1.53%	1	0.7203	Euro	1 042 628.45
4	Azerbaijan	0.015	0.019135469	25 513.96	5.82%	1	0.7953	New manat	20 291.25
5	Belarus	0.042	0.053579314	71 439.09	11.21%	0			0.00
6	Belgium	1.075	1.371375301	1 828 500.40	1.72%	1	0.7203	Euro	1 317 068.84
7	Bulgaria	0.038	0.048476522	64 635.36	3.42%	1	1.4089	Lev	91 064.76
8	Canada	3.207	4.091163338	5 454 884.45	1.43%	1	0.9802	Canadian dollar	5 346 877.74
9	Cyprus	0.046	0.058682106	78 242.81	2.21%	1	0.7203	Euro	56 358.29
10	Czech Republic	0.349	0.445218586	593 624.78	1.52%	1	17.71	Czech koruna	10 513 094.88
11	Denmark	0.736	0.938913694	1 251 884.93	1.87%	1	5.3696	Danish krone	6 722 121.30
12	Estonia	0.040	0.051027918	68 037.22	2.50%	1	0.7203	Euro	49 007.21
13	Finland	0.566	0.722045042	962 726.72	2.10%	1	0.7203	Euro	693 452.06
14	France	6.123	7.811098572	10 414 798.10	1.33%	1	0.7203	Euro	7 501 779.07
15	Germany	8.018	10.228546195	13 638 061.59	1.19%	1	0.7203	Euro	9 823 495.77
16	Greece	0.691	0.881507286	1 175 343.05	2.86%	1	0.7203	Euro	846 599.60

No.	Parties	United Nations scale of assessments for 2010–2012	Adjusted United Nations scale of assessments with no party contributing more than 22%	Annual contributions (in United States dollars) for years 2012, 2013 and 2014	Average inflation rate for the period 2009–2011	Qualifying for FERM Use Yes=1 No=0	FERM Users' currencies rates of exchange	FERM users' national currencies	FERM users' payments in national currencies
17	Holy See <sup>9</sup>	0.001	0.001275698	1 700.93					
18	Hungary	0.291	0.371228105	494 970.81	4.38%	1	195.2083	Forint	96 622 409.62
19	Iceland	0.042	0.053579314	71 439.09	6.67%	1	115.25	Icelandic krona	8 233 354.59
20	Ireland	0.498	0.635297581	847 063.44	-0.91%	1	0.7203	Euro	610 139.80
21	Israel	0.384	0.489868014	653 157.35	3.02%	1	3.53	Shekel	2 305 645.45
22	Italy	4.999	6.377214072	8 502 952.10	1.45%	1	0.7203	Euro	6 124 676.39
23	Japan	12.530	15.984495363	21 312 660.48	-0.64%	1	81.915	Yen	1 745 826 583.58
24	Latvia	0.038	0.048476522	64 635.36	1.69%	1	0.5094	Lats	32 925.25
25	Liechtenstein	0.009	0.011481282	15 308.38		1	0.9134	Swiss franc	13 982.67
26	Lithuania	0.065	0.082920367	110 560.49	2.92%	1	2.4869	Litas	274 952.88
27	Luxembourg	0.090	0.114812816	153 083.75	2.04%	1	0.7203	Euro	110 266.23
28	Malta	0.017	0.021686865	28 915.82	2.31%	1	0.7203	Euro	20 828.07
29	Monaco	0.003	0.003827094	5 102.79		1	0.7203	Euro	3 675.54
30	Netherlands	1.855	2.366419705	3 155 226.27	1.38%	1	0.7203	Euro	2 272 709.48
31	New Zealand	0.273	0.348265541	464 354.06	2.85%	1	1.2873	New Zealand dollar	597 762.98
32	Norway	0.871	1.111132918	1 481 510.56	2.11%	1	5.637	Norwegian krone	8 351 275.01
33	Poland	0.828	1.056277906	1 408 370.54	3.36%	1	2.8595	Zloty	4 027 235.56
34	Portugal	0.511	0.651881654	869 175.54	0.95%	1	0.7203	Euro	626 067.14
35	Romania	0.177	0.225798538	301 064.72	5.94%	1	3.025	Leu	910 720.77
36	Russian Federation	1.602	2.043668122	2 724 890.83	9.27%	1	28.8617	Roubles	78 644 981.66

<sup>9</sup> Ibid.

No.	Parties	United Nations scale of assessments for 2010–2012	Adjusted United Nations scale of assessments with no party contributing more than 22%	Annual contributions (in United States dollars) for years 2012, 2013 and 2014	Average inflation rate for the period 2009–2011	Qualifying for FERM Use Yes=1 No=0	FERM Users' currencies rates of exchange	FERM users' national currencies	FERM users' payments in national currencies
37	San Marino	0.003	0.003827094	5 102.79			0.7203		
38	Slovakia	0.142	0.181149109	241 532.15	1.67%	1	0.7203	Euro	173 975.60
39	Slovenia	0.103	0.131396889	175 195.85	1.62%	1	0.7203	Euro	126 193.57
40	Spain	3.177	4.052892400	5 403 856.53	1.47%	1	0.7203	Euro	3 892 397.86
41	Sweden	1.064	1.357342623	1 809 790.16	1.97%	1	6.4202	Swedish krona	11 619 214.81
42	Switzerland	1.130	1.441538688	1 922 051.58	0.37%	1	0.9134	Swiss franc	1 755 601.92
43	Tajikistan	0.002	0.002551396	3 401.86	8.95%	1	4.4767	Somoni	15 229.11
44	Ukraine	0.087	0.110985722	147 980.96	11.48%	0	0		0.00
45	United Kingdom	6.604	8.424709288	11 232 945.72	3.22%	1	0.6223	Pound Sterling	6 990 262.12
46	United States of America	22.000	22.000000000	29 333 333.33	1.16%	1	1	United States dollar	29 333 333.33
47	Uzbekistan	0.010	0.012756980	17 009.31	11.68%	0	0		0.00
	<b>Total</b>	<b>83.143</b>	<b>100.000000000</b>	<b>133 333 333.33</b>					

## Annex IV

**Trust fund for the Montreal Protocol on substances that deplete the ozone layer  
Approved 2011 and 2012 and proposed 2013 budgets (in United States dollars)**

		w/m	2011	w/m	2012	w/m	2013		
<b>10</b>	<b>Project personnel component</b>								
	<i>1100</i>								
			<i>Project personnel</i>						
	1101		Executive Secretary (D-2) (shared with the Vienna Convention (VC)) <sup>1</sup>	6	166 757	6	166 000	6	166 000
	1102	12	Deputy Executive Secretary (D-1)	12	259 560	12	272 538	12	275 367
	1103	12	Senior Legal Officer (P-5)	12	202 632	12	208 711	12	208 711
	1104	6	Senior Scientific Affairs Officer (P-5) (shared with VC)	6	130 000	6	130 000	6	130 000
	1105		Administrative Officer (P-5) (paid by UNEP)		0		0		0
	1106	12	Database Manager (Information System and Technology (P-4)	12	150 115	12	154 618	12	159 257
	1107	12	Programme Officer (Communication & Information (P-3) (paid from VC)	12	0	12	0	12	0
	1108	12	Programme Officer (Monitoring and Compliance (P-4)	12	188 000	12	193 640	12	199 449
	1199		Subtotal		1 097 064		1 125 507		1 138 784
	<i>1200</i>								
			<i>Consultants</i>						
	1201		Assistance in data-reporting, analysis and promotion of the implementation of the Protocol		40 000		75 000		75 000
	1299		Subtotal		40 000		75 000		75 000
	<i>1300</i>								
			<i>Administrative support</i>						
	1301	6	Administrative Assistant (G-7) (shared with VC)	6	21 250	6	21 888	6	22 545
	1302	12	Administrative Assistant (G-6)	12	27 000	12	28 350	12	29 768
	1303	12	Programme Assistant (G-6) (paid from VC)	12	0	12	0	12	0
	1304	6	Programme Assistant (Data) (G-6) (shared with VC)	6	17 573	6	18 452	6	19 375
	1305	6	Information Assistant (Research) (G-6) (shared with VC)	6	16 295	6	16 295	6	16 295

		w/m	2011	w/m	2012	w/m	2013	
	1306	Information Management Assistant/Documentation Clerk (G-6)	12	27 560	12	28 387	12	29 239
	1307	Data Assistant (Computer Information Systems Assistant) (G-7)	12	42 174	12	44 704	12	46 940
	1308	Administrative Assistant - Fund (G-7) (paid by UNEP)	12	0	12	0	12	0
	1309	Team Assistant/Logistics Assistant (G-4) (paid by UNEP)	12	0	12	0	12	0
	1310	Meetings Services Assistant/Bilingual Senior Secretary (G-6) (paid from VC)	12	0	12	0	12	0
	1320	Temporary assistance		21 300		21 300		21 300
	1321	Open-ended Working Group meetings		490 000		490 000		490 000
	1322	Preparatory and parties meetings (shared with VC every three years, applies to the Twenty-Third and Twenty-Sixth Meetings of the Parties to the Montreal Protocol and the ninth and tenth meetings of the Conference of the Parties to the Vienna Convention in 2011 and 2014)		350 000		500 000		500 000
	1323	Assessment panel meetings		75 000		75 000		75 000
	1324	Bureau meeting		20 000		20 000		20 000
	1325	Implementation Committee meetings		111 200		111 200		111 200
	1326	MP informal consultation meetings		10 000		10 000		10 000
	1399	Subtotal		1 229 352		1 385 575		1 391 660
	1600	<i>Travel on official business</i>						
	1601	Staff travel on official business		210 000		210 000		210 000
	1602	Conference Services staff travel on official business		15 000		15 000		15 000
	1699	Subtotal		225 000		225 000		225 000
<b>1999</b>	<b>Component total</b>			<b>2 591 416</b>		<b>2 811 083</b>		<b>2 830 444</b>
<b>20</b>	<b>Contracts</b>							
	2300	<i>Subcontracts</i> <sup>2</sup>						
	2301			70 000		57 134		0
	2399	Subtotal		70 000		57 134		0
<b>2999</b>	<b>Component total</b>			<b>70 000</b>		<b>57 134</b>		<b>0</b>

		w/m	2011	w/m	2012	w/m	2013
<b>30</b>	<b>Meeting/Participation component</b>						
3300	<i>Support for participation</i>						
3301	Assessment panel meetings <sup>3</sup>		500 000		450 000		450 000
3302	Preparatory and parties meetings (Montreal Protocol bears the cost of the participation of MP and VC delegates from A-5 countries at the joint 23rd MOP and 9th COP in 2011)		350 000		350 000		350 000
3303	Open-ended Working Group meetings		300 000		300 000		300 000
3304	Bureau meeting		20 000		20 000		20 000
3305	Implementation Committee meetings		125 000		125 000		125 000
3306	Consultations in an informal meeting		10 000		10 000		10 000
3399	Subtotal		1 305 000		1 255 000		1 255 000
<b>3999</b>	<b>Component total</b>		<b>1 305 000</b>		<b>1 255 000</b>		<b>1 255 000</b>
<b>40</b>	<b>Equipment and premises component</b>						
4100	<i>Expendable equipment (items under \$1 500)</i>						
4101	Miscellaneous expendables (shared with VC)		22 000		20 000		20 000
4199	Subtotal		22 000		20 000		20 000
4200	<i>Non-expendable equipment</i>						
4201	Personal computers and accessories		20 000		5 000		5 000
4202	Portable computers		5 000		5 000		5 000
4203	Other office equipment (server, fax, scanner, furniture etc.)		20 000		5 000		5 000
4204	Photocopiers		5 000		5 000		5 000
4205	Equipment and peripherals for paperless conferences		0		10 000		5 000
4299	Subtotal		50 000		30 000		25 000
4300	<i>Premises</i>						
4301	Rental of office premises (shared with VC)		48 000		49 440		50 882
4399	Subtotal		48 000		49 440		50 882
<b>4999</b>	<b>Component total</b>		<b>120 000</b>		<b>99 440</b>		<b>95 882</b>



		w/m	2011	w/m	2012	w/m	2013
<b>50</b>	<b>Miscellaneous component</b>						
	<i>5100</i>						
			<i>Operation and maintenance of equipment</i>				
		5101	Maintenance of equipment and others (shared with VC)	25 000	20 000	20 000	20 000
	5199		Subtotal	25 000	20 000	20 000	20 000
	<i>5200</i>						
			<i>Reporting costs</i>				
		5201	Reporting	35 000	25 000	25 000	25 000
		5202	Reporting (assessment panels)	10 000	10 000	10 000	10 000
		5203	Reporting (Protocol awareness)	5 000	5 000	5 000	5 000
	5299		Subtotal	50 000	40 000	40 000	40 000
	<i>5300</i>						
			<i>Sundry</i>				
		5301	Communications	36 000	25 000	25 000	25 000
		5302	Freight charges	35 000	30 000	25 000	25 000
		5303	Training	12 000	12 000	12 000	12 000
		5304	Others (International Ozone Day)	10 000	10 000	10 000	10 000
	5399		Subtotal	93 000	77 000	72 000	72 000
	<i>5400</i>						
			<i>Hospitality</i>				
		5401	Hospitality	25 000	20 000	20 000	20 000
	5499		Subtotal	25 000	20 000	20 000	20 000
<b>5999</b>	<b>Component total</b>			<b>193,000</b>	<b>157 000</b>	<b>152 000</b>	<b>152 000</b>
<b>99</b>	<b>Total direct project cost</b>			<b>4 279 416</b>	<b>4 379 657</b>	<b>4 333 326</b>	<b>4 333 326</b>
	<i>Programme support costs (13%)</i>			<b>556 324</b>	<b>569 355</b>	<b>563 332</b>	<b>563 332</b>
	<b>GRAND TOTAL (inclusive of programme support costs)</b>			<b>4 835 740</b>	<b>4 949 012</b>	<b>4 896 659</b>	<b>4 896 659</b>
	<b>Operating cash reserve exclusive of programme support costs<sup>5</sup></b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Total budget</b>			<b>4 835 740</b>	<b>4 949 012</b>	<b>4 896 659</b>	<b>4 896 659</b>
	<b>Drawdown<sup>6</sup></b>			<b>558 807</b>	<b>672 079</b>	<b>619 726</b>	<b>619 726</b>
	<b>Contribution from the parties</b>			<b>4 276 933</b>	<b>4 276 933</b>	<b>4 276 933</b>	<b>4 276 933</b>

1 By decision XXII/21, the parties requested the President of the Bureau of the Twenty-Second Meeting of the Parties to convey to the Secretary-General of the United Nations the Parties' request to find a way to extend the tenure of the current Executive Secretary of the Ozone Secretariat through 2015. At the thirty-first meeting of the Open-ended Working Group, the President conveyed to the parties that he had received confirmation from the Chef-de-Cabinet of the Secretary-General that the Executive Secretary's contract was being extended by two-years, until October 2013. There are no additional budget implications of this extension.

2 In accordance with decision XXII/2, and under the steering panel created by that decision, the Secretariat entered into a contract with ICF International for the preparation of an evaluation of the financial mechanism.

3 Budget line covers participation of all TEAP experts to enable the timely completion of the work requested by the Parties.

4 As paperless meetings have been successful since 2008, there has been both a decrease and shift in the resources needed for certain budget lines. The Secretariat introduced line 4205 as a new budget line to ensure transparency in reporting of related expenditures in this area.

5 The Secretariat is maintaining the operating cash reserve at 15 per cent of the annual budget in accordance with paragraph 5 of decision XXII/21. As the 15 per cent level has been reached, there is no need to allocate funds in this area from 2011 and beyond until such time as the parties decide to increase the level to meet the final expenditures under the Trust Fund.

6 Prior years' drawdown levels were set with a view to maintaining the level of contributions constant through 2011. A drawdown for 2012 and 2013 is designed to keep contributions stable.

## Explanatory notes for the approved 2012 and 2013 budgets of the Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer

Budget line	Comment
Personnel component 1101–1108	Indicative Professional salary costs applicable to the relevant duty stations have been used for the budget proposals. Where information on actual staff costs is available, however, the figures have been adjusted accordingly. Unspent commitments normally revert to the Trust Fund for the Montreal Protocol.
1105	The post of Administrative Officer continues to be paid by UNEP from the 13 per cent programme support costs.
Consultants – 1201	Assistance in data reporting, updating of publications, translation of essential features of the Ozone Secretariat website and the maintenance of a fully interlinked digital system at the Secretariat will continue to be required. Funds under this line may be transferred to line 1100 to create or support short-term Professional posts if necessary.
Administrative support/personnel 1301- 1309	Standard General Service salary costs applicable to the Nairobi duty station have been used for the 2012–2013 budget proposals.
1310	The post of Bilingual Secretary is funded from the Vienna Convention Trust Fund.
Administrative support/Conference services – 1321–1326	Necessary funds may be transferred from the conference servicing budget lines (1321–1326) should such services be required, either through individual consultancies or corporate contracts.  The current conference servicing costs have been based on the following reasons and assumptions:  1321: The budget proposed is for one meeting of the Open-ended Working Group to be held each year in 2012 and 2013 in Nairobi or at another United Nations venue, in the six official United Nations languages;  1322: The Montreal Protocol budgets for 2011 and 2014 will be shared with the Vienna Convention budgets for the ninth and tenth meetings of the Conference of the Parties to the Vienna Convention;

Budget line	Comment
	<p>The budgeted amount is based on the estimated cost of holding the Meeting of the Parties in Nairobi in 2012 and 2013, in the six official United Nations languages. Any additional costs arising from holding the meetings in a location other than Nairobi will be borne by the Governments hosting the meetings;</p> <p>1323: The budget allocation in 2012 and 2013 will cover the costs of organizing annual meetings of the assessment panels and the Technology and Economic Assessment Panel's technical options committees, together with communication and other sundry costs related to the work of Panel members from developing countries and countries with economies in transition;</p> <p>1324: One Bureau meeting is scheduled for each of the years 2012 and 2013, with provision for interpretation and document translation into the appropriate languages based on the membership of the Bureau;</p> <p>1325: At least two Implementation Committee meetings of three days' duration are scheduled for each of the years 2012 and 2013, with interpretation and document translation as required, to be held back-to-back with the Open-ended Working Group meetings and the meetings of the parties in those years;</p> <p>1326: At least one informal consultation meeting per year, expected to take place in Nairobi, is envisaged for 2012 and 2013 to facilitate the work of assisting the parties and promoting ratification of and compliance with the Montreal Protocol and its amendments.</p>
Travel on official business – 1601–1602	Travel on official business for 2012 and 2013 is being maintained at the 2011 level.
Meetings/Participation component – 3300	<p>Participation of representatives of developing countries</p> <p>The participation of representatives of parties operating under paragraph 1 of Article 5 in the various Protocol meetings is budgeted at \$5,000 per meeting per representative, taking into account no more than one person's travel costs per country, using the most appropriate and advantageous economy-class fare and United Nations daily subsistence allowances.</p>
3301	<p>The budget provision requested in 2012 for travel of members and experts of the assessment panels and the technical options committees attending assessment panel meetings has been reduced from the 2011 levels. Additional funds will be requested as required for the next assessment process.</p>

Budget line	Comment
3302	<p>In 2011 and 2014, the total participation costs based on some 80 participants attending the joint meetings of the Conference of the Parties to the Vienna Convention and the Meeting of the Parties to the Montreal Protocol, will be borne fully by the Trust Fund for the Montreal Protocol.</p> <p>Participation costs are based on some 60 participants attending the Open-ended Working Group meetings in both 2012 and 2013.</p>
3303	Participation costs are based on one Bureau meeting per year for four Bureau members from developing countries or countries with economies in transition at each meeting.
3304	Participation costs are based on one Bureau meeting per year for four Bureau members from developing countries or countries with economies in transition at each meeting.
3305	<p>The participation costs for the two Implementation Committee meetings per year are based on eight members from developing countries and countries with economies in transition at each meeting and one representative each from three or four countries invited by the Implementation Committee at each meeting. Provision has also been made for travel by the Implementation Committee President or Vice-President from a country operating under paragraph 1 of Article 5 to attend three Executive Committee meetings a year.</p>
3306	Funds have been allocated to finance the participation of two participants from developing countries and countries with economies in transition in informal consultations in 2012 and 2013 on critical issues relating to the Montreal Protocol. It is expected that these consultations will be held in Nairobi.
Equipment and premises component	
Expendable equipment – 4101	The cost of miscellaneous expendables is being increased minimally in 2012 and 2013 to take into account inflation. Resource use is being monitored constantly to maintain low expenditure levels.
Non-expendable equipment – 4203	Additional funds for 2012 and 2013 have been allocated to provide for increased server capacity to cope with the demands of paperless meetings and to enable the Secretariat to replace equipment as required.
Premises (rent) – 4300	The allocation for rental of premises in 2012 and 2013 has been based on an increase in Nairobi rental rates imposed by the United Nations Controller.
Miscellaneous component	

Budget line	Comment
Operation and maintenance of equipment – 5101	The provision for operation and maintenance of equipment is being increased minimally in 2012 and 2013 to cover increased maintenance costs for constantly increasing server capacity and additional computing requirements for staff.
Reporting costs (including editing, translation, duplication, publication and printing) – 5201–5203	General reporting costs for the Secretariat are provided for under these lines. Line 5202 is reserved for reporting of assessment panels. A small amount is allocated in line 5203 for any editing, translation, duplication, publication and printing related to Protocol awareness campaigns.
Sundry – Communications – 5301	Careful monitoring of telecommunications resources and the use of electronic mail instead of facsimile communications enable the Secretariat to maintain a relatively low budget provision under this line.
Training – 5303	The provision for training will be maintained to meet evolving training needs and to cater for training schemes introduced by the United Nations as a result of its continuing human resources reform programme and guidelines for continuous training to encourage high performance delivery of staff.
Others (International Ozone Day) – 5304	The Ozone Secretariat will continue to provide assistance to specific countries during 2012 and 2013 to assist in their preparations for the celebration of the International Day for the Preservation of the Ozone Layer.

## Annex V

**Trust Fund for the Montreal Protocol on the Substances that Deplete the Ozone Layer**

Scale of contributions by the parties for 2012 and 2013 based on the United Nations scale of assessments  
(General Assembly resolution 64/248 of 24 December 2009 with a maximum assessment rate of 22 per cent)  
(in United States dollars)

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Afghanistan	0.004	0.000	0.000	0	0
Albania	0.010	0.000	0.000	0	0
Algeria	0.128	0.128	0.128	5 465	5 465
Andorra	0.007	0.000	0.000	0	0
Angola	0.010	0.000	0.000	0	0
Antigua and Barbuda	0.002	0.000	0.000	0	0
Argentina	0.287	0.287	0.287	12 255	12 255
Armenia	0.005	0.000	0.000	0	0
Australia	1.933	1.933	1.930	82 537	82 537
Austria	0.851	0.851	0.850	36 337	36 337
Azerbaijan	0.015	0.000	0.000	0	0
Bahamas	0.018	0.000	0.000	0	0
Bahrain	0.039	0.000	0.000	0	0
Bangladesh	0.010	0.000	0.000	0	0
Barbados	0.008	0.000	0.000	0	0
Belarus	0.042	0.000	0.000	0	0
Belgium	1.075	1.075	1.073	45 901	45 901
Belize	0.001	0.000	0.000	0	0
Benin	0.003	0.000	0.000	0	0

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Bhutan	0.001	0.000	0.000	0	0
Bolivia (Plurinational State of)	0.007	0.000	0.000	0	0
Bosnia and Herzegovina	0.014	0.000	0.000	0	0
Botswana	0.018	0.000	0.000	0	0
Brazil	1.611	1.611	1.608	68 788	68 788
Brunei Darussalam	0.028	0.000	0.000	0	0
Bulgaria	0.038	0.000	0.000	0	0
Burkina Faso	0.003	0.000	0.000	0	0
Burundi	0.001	0.000	0.000	0	0
Cambodia	0.003	0.000	0.000	0	0
Cameroon	0.011	0.000	0.000	0	0
Canada	3.207	3.207	3.202	136 935	136 935
Cape Verde	0.001	0.000	0.000	0	0
Central African Republic	0.001	0.000	0.000	0	0
Chad	0.002	0.000	0.000	0	0
Chile	0.236	0.236	0.236	10 077	10 077
China	3.189	3.189	3.184	136 167	136 167
Colombia	0.144	0.144	0.144	6 149	6 149
Comoros	0.001	0.000	0.000	0	0
Congo	0.003	0.000	0.000	0	0
Cook Islands	-	0.000	0.000	0	0
Costa Rica	0.034	0.000	0.000	0	0
Côte d'Ivoire	0.010	0.000	0.000	0	0
Croatia	0.097	0.000	0.000	0	0
Cuba	0.071	0.000	0.000	0	0



Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Cyprus	0.046	0.000	0.000	0	0
Czech Republic	0.349	0.349	0.348	14 902	14 902
Democratic People's Republic of Korea	0.007	0.000	0.000	0	0
Democratic Republic of the Congo	0.003	0.000	0.000	0	0
Denmark	0.736	0.736	0.735	31 426	31 426
Djibouti	0.001	0.000	0.000	0	0
Dominica	0.001	0.000	0.000	0	0
Dominican Republic	0.042	0.000	0.000	0	0
Ecuador	0.040	0.000	0.000	0	0
Egypt	0.094	0.000	0.000	0	0
El Salvador	0.019	0.000	0.000	0	0
Equatorial Guinea	0.008	0.000	0.000	0	0
Eritrea	0.001	0.000	0.000	0	0
Estonia	0.040	0.000	0.000	0	0
Ethiopia	0.008	0.000	0.000	0	0
European Union	2.500	2.500	2.496	106 747	106 747
Fiji	0.004	0.000	0.000	0	0
Finland	0.566	0.566	0.565	24 168	24 168
France	6.123	6.123	6.113	261 445	261 445
Gabon	0.014	0.000	0.000	0	0
Gambia	0.001	0.000	0.000	0	0
Georgia	0.006	0.000	0.000	0	0
Germany	8.018	8.018	8.005	342 360	342 360
Ghana	0.006	0.000	0.000	0	0
Greece	0.691	0.691	0.690	29 505	29 505
Grenada	0.001	0.000	0.000	0	0

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Guatemala	0.028	0.000	0.000	0	0
Guinea	0.002	0.000	0.000	0	0
Guinea-Bissau	0.001	0.000	0.000	0	0
Guyana	0.001	0.000	0.000	0	0
Haiti	0.003	0.000	0.000	0	0
Holy See <sup>10</sup>	0.001	0.000	0.000	0	0
Honduras	0.008	0.000	0.000	0	0
Hungary	0.291	0.291	0.291	12 425	12 425
Iceland	0.042	0.000	0.000	0	0
India	0.534	0.534	0.533	22 801	22 801
Indonesia	0.238	0.238	0.238	10 162	10 162
Iran (Islamic Republic of)	0.233	0.233	0.233	9 949	9 949
Iraq	0.020	0.000	0.000	0	0
Ireland	0.498	0.498	0.497	21 264	21 264
Israel	0.384	0.384	0.383	16 396	16 396
Italy	4.999	4.999	4.991	213 452	213 452
Jamaica	0.014	0.000	0.000	0	0
Japan	12.530	12.530	12.509	535 017	535 017
Jordan	0.014	0.000	0.000	0	0
Kazakhstan	0.076	0.000	0.000	0	0
Kenya	0.012	0.000	0.000	0	0
Kiribati	0.001	0.000	0.000	0	0
Kuwait	0.263	0.263	0.263	11 230	11 230
Kyrgyzstan	0.001	0.000	0.000	0	0

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10 Ibid.

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Lao People's Democratic Republic	0.001	0.000	0.000	0	0
Latvia	0.038	0.000	0.000	0	0
Lebanon	0.033	0.000	0.000	0	0
Lesotho	0.001	0.000	0.000	0	0
Liberia	0.001	0.000	0.000	0	0
Libya	0.129	0.129	0.129	5 508	5 508
Liechtenstein	0.009	0.000	0.000	0	0
Lithuania	0.065	0.000	0.000	0	0
Luxembourg	0.090	0.000	0.000	0	0
Madagascar	0.003	0.000	0.000	0	0
Malawi	0.001	0.000	0.000	0	0
Malaysia	0.253	0.253	0.253	10 803	10 803
Maldives	0.001	0.000	0.000	0	0
Mali	0.003	0.000	0.000	0	0
Malta	0.017	0.000	0.000	0	0
Marshall Islands	0.001	0.000	0.000	0	0
Mauritania	0.001	0.000	0.000	0	0
Mauritius	0.011	0.000	0.000	0	0
Mexico	2.356	2.356	2.352	100 599	100 599
Micronesia (Federated State of)	0.001	0.000	0.000	0	0
Monaco	0.003	0.000	0.000	0	0
Mongolia	0.002	0.000	0.000	0	0
Montenegro	0.004	0.000	0.000	0	0
Morocco	0.058	0.000	0.000	0	0
Mozambique	0.003	0.000	0.000	0	0

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Myanmar	0.006	0.000	0.000	0	0
Namibia	0.008	0.000	0.000	0	0
Nauru	0.001	0.000	0.000	0	0
Nepal	0.006	0.000	0.000	0	0
Netherlands	1.855	1.855	1.852	79 206	79 206
New Zealand	0.273	0.273	0.273	11 657	11 657
Nicaragua	0.003	0.000	0.000	0	0
Niger	0.002	0.000	0.000	0	0
Nigeria	0.078	0.000	0.000	0	0
Niue	-	0.000	0.000	0	0
Norway	0.871	0.871	0.870	37 191	37 191
Oman	0.086	0.000	0.000	0	0
Pakistan	0.082	0.000	0.000	0	0
Palau	0.001	0.000	0.000	0	0
Panama	0.022	0.000	0.000	0	0
Papua New Guinea	0.002	0.000	0.000	0	0
Paraguay	0.007	0.000	0.000	0	0
Peru	0.090	0.000	0.000	0	0
Philippines	0.090	0.000	0.000	0	0
Poland	0.828	0.828	0.827	35 355	35 355
Portugal	0.511	0.511	0.510	21 819	21 819
Qatar	0.135	0.135	0.135	5 764	5 764
Republic of Korea	2.260	2.260	2.256	96 499	96 499
Republic of Moldova	0.002	0.000	0.000	0	0
Romania	0.177	0.177	0.177	7 558	7 558

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Russian Federation	1.602	1.602	1.599	68 404	68 404
Rwanda	0.001	0.000	0.000	0	0
Saint Kitts and Nevis	0.001	0.000	0.000	0	0
Saint Lucia	0.001	0.000	0.000	0	0
Saint Vincent and the Grenadines	0.001	0.000	0.000	0	0
Samoa	0.001	0.000	0.000	0	0
San Marino	0.003	0.000	0.000	0	0
Sao Tome and Principe	0.001	0.000	0.000	0	0
Saudi Arabia	0.830	0.830	0.829	35 440	35 440
Senegal	0.006	0.000	0.000	0	0
Serbia	0.037	0.000	0.000	0	0
Seychelles	0.002	0.000	0.000	0	0
Sierra Leone	0.001	0.000	0.000	0	0
Singapore	0.335	0.335	0.334	14 304	14 304
Slovakia	0.142	0.142	0.142	6 063	6 063
Slovenia	0.103	0.103	0.103	4 398	4 398
Solomon Islands	0.001	0.000	0.000	0	0
Somalia	0.001	0.000	0.000	0	0
South Africa	0.385	0.385	0.384	16 439	16 439
Spain	3.177	3.177	3.172	135 654	135 654
Sri Lanka	0.019	0.000	0.000	0	0
Sudan	0.010	0.000	0.000	0	0
Suriname	0.003	0.000	0.000	0	0
Swaziland	0.003	0.000	0.000	0	0
Sweden	1.064	1.064	1.062	45 432	45 432

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Switzerland	1.130	1.130	1.128	48 250	48 250
Syrian Arab Republic	0.025	0.000	0.000	0	0
Tajikistan	0.002	0.000	0.000	0	0
Thailand	0.209	0.209	0.209	8 924	8 924
The former Yugoslav Republic of Macedonia	0.007	0.000	0.000	0	0
Timor-Leste	0.001	0.000	0.000	0	0
Togo	0.001	0.000	0.000	0	0
Tonga	0.001	0.000	0.000	0	0
Trinidad and Tobago	0.044	0.000	0.000	0	0
Tunisia	0.030	0.000	0.000	0	0
Turkey	0.617	0.617	0.616	26 345	26 345
Turkmenistan	0.026	0.000	0.000	0	0
Tuvalu	0.001	0.000	0.000	0	0
Uganda	0.006	0.000	0.000	0	0
Ukraine	0.087	0.000	0.000	0	0
United Arab Emirates	0.391	0.391	0.390	16 695	16 695
United Kingdom of Great Britain and Northern Ireland	6.604	6.604	6.593	281 983	281 983
United Republic of Tanzania	0.008	0.000	0.000	0	0
United States of America	22.000	22.000	21.964	939 375	939 375
Uruguay	0.027	0.000	0.000	0	0
Uzbekistan	0.010	0.000	0.000	0	0
Vanuatu	0.001	0.000	0.000	0	0
Venezuela (Bolivarian Republic of)	0.314	0.314	0.313	13 407	13 407
Viet Nam	0.033	0.000	0.000	0	0
Yemen	0.010	0.000	0.000	0	0

Party	United Nations scale of assessments for 2010–2012	United Nations scale adjusted to exclude non-contributors	Adjusted United Nations scale with 22% maximum assessment rate considered	2012 Contributions by parties	Indicative 2013 contributions by parties
Zambia	0.004	0.000	0.000	0	0
Zimbabwe	0.003	0.000	0.000	0	0
<b>Total</b>	<b>102.501</b>	<b>100.165</b>	<b>100.000</b>	<b>4 276 933</b>	<b>4 276 933</b>

## Annex VI

### Summaries of presentations by members of the assessment panels and technical options committees<sup>11</sup> during the preparatory segment

#### I. Supplemental report of the Technology and Economic Assessment Panel replenishment task force

1. Ms. Shiqiu Zhang, co-chair of the Technology and Economic Assessment Panel (TEAP) Replenishment Task Force (RTF), started the presentation and said that the total estimated funding requirement for the triennium 2012-2014 is likely to be in the range of US\$ 460 to US\$ 540 million. This amount was based on HPMPs approved through ExCom-64 and on amounts from six scenarios applied for not-yet-approved HPMPs (two HCFC reduction packages and three levels of funded phase-out), plus production closure funding that was assumed to take place in parallel. She mentioned that, for comparison, the funding range estimated in the May 2011 RTF report was US\$ 390-477 million, which is approximately US\$ 70 million lower.
2. After the Replenishment Report had been published in May 2011 and had been introduced at the thirty first meeting of the Open Ended Working Group (OEWG), a Contact Group was set up at the OEWG to formulate additional requests for a supplementary study. The Contact Group agreed on a list of issues for further study. That list included a request for an update on baselines, an update on HPMPs approved at the sixty forth meeting of the Executive Committee, a study of reduction packages, a revised funding requirement for 2012-2014 and subsequent triennia, details on climate benefits, different funding scenarios for production closure, cost effectiveness aspects and considerations on low-GWP applications, the effect of inflation on Institutional Strengthening and the impact of zero and negative growth for supporting activities. The TEAP and its RTF performed the study August-September 2011 and submitted the supplement report to UNEP the beginning of October 2011; a brief addendum was subsequently issued the beginning of November.
3. Mr. Lambert Kuijpers continued the presentation and went back to the main points presented in the May 2011 report, which gave a funding range for 2012-2014 as US\$ 390-477 million with indicative funding ranges for the two subsequent triennia. In this report production phase-out was assumed to occur in parallel with consumption phase-down (as in the 2008 study). In September 2011, an additional 21 HPMPs were approved at the sixty forth meeting of the Executive Committee in July 2011 at a total cost of US\$ 340 million, with 6 HPMPs approved for non-low volume consuming (LVC) countries including China. Parties had requested a study of the impact of funding options for swing plants (which produce about 18% of HCFC-22 produced in parties operating under paragraph 1 of Article 5), as well as an investigation of moving production sector funding tranches to later years. The Task Force had investigated options for three triennia, including the phasing out of 10% of production in 2012-14
4. On baseline data, Mr. Kuijpers said that, as of 1 September 2011, 86 Parties had submitted 2010 data, 59 Parties had not, which included China and India. Of the 86 Parties, 14 Parties were non-LVCs, where 5 had increased consumption levels (as much as 20%) and 9 Parties had decreased consumption levels (as much as 20% less), compared to the year 2009. The Task Force had taken into account all new available data to refine the baseline estimates in the revised funding requirement calculations. Mr. Kuijpers then presented a table with the different funding elements for the period 2011-2014 at a total of US\$ 492.73 million, plus the costs for new yet to be approved HPMPs, plus production closure costs. He explained how the calculations were done to come to an estimate of the funding range for the triennium 2012-2014. He also mentioned the production closure costs that need to be brought into the total and said that together, these factors yield a funding estimate for 2012-14 as US\$ 460-540 million, where the range for the funding estimate for 2012-14 without production amounts to US\$ 276-315 million.
5. The Task Force had done investigations on reduction packages. It noted that the foam percentage in the packages is relatively large, which would lead to “negative” consumption if the same package was used in estimates for subsequent triennia
6. The (new) 55-20-25% package chosen was the basis for the estimates for the two subsequent triennia (in ODP tonnes). Parties requested examination of the impact of the HCFC reductions expressed in Mt CO<sub>2</sub> eq. The baseline consumption equals 782 Mt CO<sub>2</sub> eq./year, where the total LVC

<sup>11</sup> The summaries in the present annex appear as submitted by the presenters, without formal editing.



and non-LVC HPMP approvals to date represent a reduction of 49 Mt CO<sub>2</sub> eq. per year. The complete Stage I HPMP contribution will be equivalent to a reduction of ~60 Mt CO<sub>2</sub> eq./yr, which is less than 10% of the baseline, because most phase-out is related to HCFC-141b, which contributes much less to GWP reductions than HCFC-22.

7. Ms. Zhang continued the presentation on the estimated funding requirements for 2015-2017 and 2018-2020, which were calculated on the basis of existing commitments, HPMPs, Institutional Strengthening, the funding of supporting activities, commitments of (new) HPMPs for LVCs and production closure costs, the latter of which contribute significantly to the total. For these triennia, new cost effectiveness values were used for Poly urethane foam, for the refrigeration and air conditioning subsector and for extruded polystyrene (XPS) foam. The Task Force estimates assumed that all non-LVCs can request stage II funding.

8. She said that the indicative funding requirement for the triennium 2015-2017 amounts to US\$ 479 million for HPMPs, US\$ 209 million for production closure plus about US\$ 112 million for other elements, giving a total funding requirement: US\$ 790 million. She said that the indicative funding requirement for the triennium 2018-2020 amounts to US\$ 461 million for HPMPs, US\$ 229 million for production closure plus about US\$ 107 million for other elements, giving a total funding requirement of US\$ 797 million.

9. Mr. Kuijpers said that Parties had requested the investigation of several elements in the production closure costs, including the production costs for each consumption scenario, the examination of approaches for swing plants and the consideration of possible redirection of controlled HCFC production to feedstock production not controlled by the Montreal Protocol. He mentioned that swing plants in Article 5 countries other than China account for 18% of total Article 5 country HCFC production and that for the 2012-2014 triennium, swing plant funding for HCFC-22 phase-out is US\$ 17.3-21.1 million. In 2015-2017 and 2018-2020, swing plant funding for HCFC-22 phase-out is US \$24 million and US \$27 million, respectively. Mr. Kuijpers mentioned that HCFC-22 feedstock production in Article 5 countries has doubled every three years during the last decade. A continuing growth trend would offer the potential for diversion of current controlled use production to feedstock; however, country-level, plant-based technical information on the practicalities of successful diversion was not yet available. He then gave specific funding range values for five production scenarios. Parties had also requested the task force to study the funding amounts for Institutional Strengthening (IS) dependent on inflation percentages. Mr. Kuijpers said that an annual 3% inflation would increase the IS funding for 2012-14 by US\$ 1.34 million, on a total of US\$ 500 million, and for 2015-17 by US\$ 4.32 million, on a total of US\$ 790 million. Parties had also asked the RTF to study the impact of 0% and -3% growth on funding for supporting activities. Mr. Kuijpers said that a -3% growth results in US\$ 5 million less per triennium for supporting activities, where the normal case results in an increase of about US\$ 6 million per triennium.

10. Mr. Daniel Colbourne, member of the Task Force continued the presentation with information on foam and refrigeration and air conditioning cost effectiveness values. He noted that the cost effectiveness for polyurethane foam depended mainly on chosen HCFC phase-out technology and size of the enterprise and the selection of technology is greatly influenced by the specific polyurethane market subsector and the size of the company to be converted

11. He mentioned that the weighted average for rigid and integral skin polyurethane foam was updated from US\$ 6.41/kg to US\$ 6.11/kg and that XPS conversion costs and the related cost effectiveness values were updated from US\$ 2.56/kg to US\$ 4.85/kg. Mr. Colbourne said that the Task Force had not adjusted the cost effectiveness values taking into account economies-of-scale. Improvements over time in cost effectiveness are considered to be 5-50%, with an average of 20%. He noted that this stemmed from more trained personnel and lower refrigerant and component costs, where it is not possible to determine a precise time scale. He also mentioned that the dependence on HPMPs with greater than 10% reduction is difficult to quantify, that global changes are very important and that cost effectiveness values from approved projects cannot be directly applied. For refrigeration and AC, the capital and operating costs had been re-evaluated. Mr. Colbourne stated that the cost effectiveness values from the May 2011 report were adjusted downward on the basis of a revised cost analysis and detailed information from project proposals, resulting in an average value of US\$ 8.8/kg, excluding funding increases for low-GWP refrigerants.

12. Mr. Colbourne concluded with a number of summarizing comments. He stated that the spreadsheet analysis has been completely updated for three triennia and that the supplement report contained a separate chapter on production in view of the overall impact on the replenishment. In this context, several approaches are available for funding the production sector with significant differences in funding levels and timing. The production closure funding is up to 30% of total funding when

production phase-out is in parallel with consumption phase-out and the lowest replenishment levels result from the choice of a 10% reduction from the production baseline. Mr. Colbourne emphasised that moving tranches of production closure funding to future triennia beyond 2020 does not help to decrease the calculated “triennia funding imbalance”. He also said that approved Stage I HPMPs incorporate a substantial ‘front loading’ of funding for consumption phase-out and that cost-effectiveness values used to calculate the second and third triennia, for stage II HPMPs, are assumed to be lower. He summarised the funding requirements again stating that all parameters together result in a funding of US\$ 500 million (+/-8%) funding for the first 2012-2014, US\$ 790 million for the second 2015-2017, and US\$ 797 million for the third triennium 2018-2020.

## **II. Nominations for 2012 and 2013 for essential-use exemptions**

13. Mr. Ashley Woodcock, co-chair of the Medical Technical Options Committee, presented the committee’s recommendations on essential use nominations for metered dose inhalers (MDIs) for 2012 and 2013, which remain unchanged from those reported in TEAP’s May Report. He provided an update on a bilateral meeting between China and co-chairs of the Medical Technical Options Committee during the Open-Ended Working Group meeting. Discussions focussed on the importance to China of locally made CFC MDIs containing anti-cholinergics. He explained that the Medical Technical Options Committee was not requested to review its assessment of China’s essential use nomination, and that therefore, the panel maintains its original recommendation that CFCs for inhalers with anti-cholinergics are not considered essential in China because more than one alternative is available, and China’s own phase-out strategy is satisfied. At that meeting it was suggested that China could choose to allocate CFCs for this use within the total allowance approved by Parties. He concluded by congratulating China for approval of the first locally made CFC-free salbutamol MDI in China. He also congratulated the United States for approval of a CFC-free albuterol and ipratropium combination inhaler, which paves the way for a complete and successful transition in the United States.

## **III. Nominations for 2012 and 2013 critical-use exemptions**

14. The co-chairs of the Methyl Bromide Technical Options Committee (MBTOC), Mr Mohamed Besri, Mr. Ian Porter, Ms Michelle Marcotte and Ms Marta Pizano provided a summary of findings of the final assessment of the Critical Use Nominations assessed during the 2011 round as set out in the final report of October 2011.

15. Introducing the issue, Mr. Besri presented a summary of the Methyl Bromide consumption in A5 and non Article 5 countries. He reported that, in 1991, 45,000 t of methyl bromide have been consumed in non Article 5 Parties and for 2013, only 704 t have been requested for preplant soil uses.

16. He explained that in 2011, three Parties, Australia, Canada and USA continue to use methyl bromide for preplant soil uses. He reported that Article 5 party consumption in 2010 was of 3,998 t, and this amount is due for phase out by 2015. This consumption was 25% of the total Article 5 party baseline of approximately 16,000 t.

17. He said that overall, critical use nominations (CUNs) continue to fall from 2010 to 2013 for the remaining four nominating Parties.

18. Regarding the available methyl bromide stocks, he said that Canada, Japan and USA have reported respectively 3.4 t, 6.3 t and 1,803 t. He explained also that MBTOC critical use recommendations did not take stocks into account. He concluded that stocks reported by USA in 2010 are 2.6 times the 2013 US nomination of 692 t.

19. He noted that the US withdrew the research nominations in October as the Party stated ‘it was now possible to conduct the program without a CUE’.

20. Mr. Porter then presented an overview of nominations received for pre-plant soil use of methyl bromide in 2012 and 2013. Seven nominations remained unchanged from the interim recommendations. MBTOC sought further information on 5 nominations and the US requested further re-evaluation of two nominations. At its second meeting, MBTOC reassessed 6 of the 13 CUNs submitted for the 2013 round. Reassessment of the nominations from Australia and Canada were not required.

21. The committee’s final recommendation was 563.463 t with 78.232 t not recommended.

22. Of the reassessed nominations, four were accepted in full, and the committee noted that the Party stated this would be the last nomination for the four vegetable nominations. MBTOC maintained

the interim recommendation for the ornamentals sector as a number of alternatives were still considered effective for a portion of the nomination.

23. MBTOC recommended a reduced amount for strawberry fruit with a majority of members agreeing that the further information provided by the Party for the strawberry fruit nomination in California did not demonstrate that technically and economically feasible alternatives were not available for specific soilborne pathogens, particularly for one region. MBTOC noted that the Party may wish to submit a supplementary bid next round if there is technical justification to show that all available methods of 1,3-D/Pic and Pic, with or without barrier films, are not effective for the circumstances of the nomination. He noted that a minority view was held on this assessment.

24. Recently, Canada advised the Secretariat that it had issued a permit for 1.9 t of MB under the 'Emergency Use' provisions of the Montreal Protocol. The Party stated that this was an unused quantity of the 2010 CUE amount approved for strawberry nurseries that was needed in early 2011.

25. Ms. Marcotte, MBTOC Co-Chair, reported that in 2011, MBTOC Structures and Commodities (SC), reviewed six CUNs. Additionally, it reviewed three elements of the US research CUN, although this CUN was later withdrawn by the Party. Flour and cereal mills in Canada and the United States remain the largest CUNs, although these have decreased significantly year over year. Commodities for which Parties have requested MB include packaged rice for Australia, fresh chestnuts for Japan, plus dried fruits (including fresh dates) and walnuts for the US, and Southern dry-cured pork.

26. MBTOC recommended the Canadian and US flour milling CUNs. Canada's nomination of 7.8 tonnes is a 29% reduction and the US nomination of 25.3 tonnes is a 66% reduction this year. MBTOC acknowledges the difficulties Parties have achieving effective fumigations in their large mills and under the cool temperatures observed during the usual fumigation times. Accordingly, MBTOC provided a special report with guidance about achieving greater efficacy with sulfur dioxide treatments.

27. Australia and Japan have indicated to MBTOC that methyl bromide use for rice and fresh chestnuts will cease in 2014. Australia nominated 2.3 tonnes for rice to allow their rice processors time to continue sustainable adoption of alternatives. This was a 35% reduction. Japan nominated a 5% reduction to 3.3 tonnes for fresh chestnuts, allowing Japan time to continued logistical improvements and farmer training programs which MBTOC believes are important for the safe use of the alternative. At the Open Ended Working Group meeting in July, MBTOC reported it was unable to assess the US nomination for dry-cured pork. Later submission by the Party of information about the research and the timing of available data allowed us to recommend the CUN in MBTOC's October report. There was however a minority view included in the MBTOC report.

28. Marcotte also noted that Decision XVI/4 Annex 16 requires MBTOC to meet twice a year to review CUNs. In view of the on-going lack of funding of members, we request clarification from the Parties to acknowledge that meetings can take place electronically. MBTOC cannot hold face to face meetings unless A(5) and Non A(5) members are funded to attend. MBTOC discusses this matter more thoroughly in its report section on resourcing.

## Annex VII

### **Draft decision XXIII/[ ]: Funding for hydrochlorofluorocarbon production facilities**

#### **Submission by India**

*The Twenty-Third Meeting of the parties decides:*

*Recalling* decision XIX/6, which states that funding through the Multilateral Fund for the Implementation of the Montreal Protocol shall be stable and sufficient to meet all agreed incremental costs to enable parties operating under paragraph 1 of Article 5 of the Montreal Protocol to comply with the accelerated phase-out schedule for hydrochlorofluorocarbons for both the production and consumption sectors,

*Recognizing* that there is limited time before the first hydrochlorofluorocarbon control measures for parties operating under paragraph 1 of Article 5 come into force with the freeze at the baseline level in 2013 and 10 per cent reduction from the baseline in 2015,

*Noting* that parties operating under paragraph 1 of Article 5 with hydrochlorofluorocarbon production facilities may be at risk of being in non-compliance with those obligations if adequate assistance is not provided through the Multilateral Fund,

To confirm the intent of decision XIX/6, which is to provide stable and sufficient funding through the Multilateral Fund to meet all agreed incremental costs to enable parties operating under paragraph 1 of Article 5 to comply with the accelerated hydrochlorofluorocarbon phase-out schedule, including the production sector without any prejudice to swing plants;

To urge the Executive Committee of the Multilateral Fund to finalize as a priority matter the guidelines for the funding of hydrochlorofluorocarbon production facilities.

## Annex VIII

### Summary of presentation on the eighth meeting of the Ozone Research Managers of the Parties to the Vienna Convention<sup>12</sup>

1. The 8th Ozone Research Managers (ORM) meeting was held in Geneva, Switzerland (2-4 May 2011) in accordance with decisions I/6 and III/8 of the Conference of the Parties. As in the past, this ORM report is highly complementary to the recent WMO-UNEP Scientific Assessments, but has a distinctly different purpose. Both the report and the assessments are required under the Vienna Convention and the Montreal Protocol. However, the Assessments enable the Parties to evaluate control measures under the Protocol and are communication devices between the research community (striving for better understanding) and decision makers (seeking informed action). The Assessments are neither policy recommendations nor research planning documents but provide input for both. The ORM reports, on the other hand, specifically address research and monitoring needs in light of scientific understanding from the assessments and make detailed recommendations to the Parties regarding international actions for improved research coordination and networking.

2. After a review of the recommendations from the 7<sup>th</sup> ORM Meeting and of activities under the Vienna Convention Trust Fund, the 8<sup>th</sup> ORM meeting continued with a number of invited presentations on the state of the ozone layer and its interactions with climate change. Subsequent talks summarized international research and monitoring programs and international satellite programs and were followed by national and regional reports of ozone and UV research and monitoring activities. This suite of presentations provided the bases for recommendations in the four principal areas of research needs, systematic observations, data archiving, and capacity building.

3. There are many questions that remain on the expected ozone recovery from the influence of ozone-depleting substances (ODSs), especially with respect to the interactions between ozone depletion and climate change. Recent research reveals that ozone depletion has affected tropospheric climate and it is becoming clearer that greenhouse gases (GHGs) are altering the stratosphere, with a cooling of the upper stratosphere by GHGs expected to exceed 5K between the years 2000 and 2100. The ability to predict future ozone behavior requires further improvements in the quantification of the roles of chemical and dynamical processes responsible for ozone production, loss, transport, and distribution, and their respective uncertainties. The development of realistic scenarios of the future abundances of anthropogenic and biogenic trace gases in the stratosphere and troposphere is required, particularly with respect to a changing climate. Simulations from the 2010 Scientific Assessment of Ozone Depletion indicate future increases of UV levels in the tropics, but decreases at mid- and high latitudes due to ozone changes. The 2010 report of the Environmental Effects Assessment Panel (EEAP) concluded that research on the impacts of increases in UV radiation resulting from stratospheric ozone depletion has substantially advanced the understanding of the processes by which changes in UV radiation affect a range of organisms and processes. Recent research has highlighted the interactions between the diverse effects of changing UV radiation due to ozone depletion and the effects of climate change. These interactions may lead to feedbacks into climate change (e.g., modification of carbon cycling in terrestrial and aquatic ecosystems), but this remains poorly defined.

4. Coupled chemistry-climate models (CCMs) are more mature, but it is clear that more effort must be devoted to model improvement and validation. Earth System Models that include crude stratospheric ozone parameterizations are being developed, and these models should begin to incorporate improved CCM treatments of the solar forcing, dynamics, radiation, and photochemistry of ozone. In addition, long-term measurements represent an extremely important resource, and the continued and increased exploitation of these data for scientific process studies is strongly recommended. The dramatic contrast between the unusually large 2010 Northern Hemisphere ozone columns and the extreme 2011 Arctic ozone depletion has highlighted the close connection between ozone, meteorology, and climate. Finally, there is still a need for fundamental laboratory studies to estimate photochemical reaction rates, and to refine and update older measurements. In particular, photochemical parameters to improve our understanding of long-lived species and new industrial compounds in the atmosphere are very important.

5. Systematic observations are critical to understanding and monitoring long-term changes in atmospheric composition and the associated response in ground-level UV radiation. The ability to predict expected ozone recovery in a changing atmosphere and to understand the interactions

<sup>12</sup> The summary in the present annex appears as submitted by the presenter, without formal editing.

with a changing climate requires observations of key trace gases and parameters highlighting the role of chemical and dynamical processes. Vertically resolved measurements, especially in the upper troposphere/lower stratosphere (UTLS) region and in the upper stratosphere, are of prime importance. Global data networks thus provide the backbone of our understanding of ozone, ozone- and climate-related trace gases, and UV, and involve many nations around the world. Their operations also provide training for atmospheric scientists in both developed and developing countries. The demands on these networks are high, in that they provide the basis for all research activities and decision-making. These networks fall into two categories, ground-based (including balloons) and space-based and their combined utilization place new demands of their operations and reporting.

6. Data archiving continues to be recognized as an essential component of all atmospheric measurements. While several notable achievements have been made in response to the recommendations in the 7<sup>th</sup> ORM meeting report, the continuing need for fully implementing other 7th ORM recommendations was emphasized. For example, before being archived, all data must be quality assured and include the metadata required by users. Other recommendations included the need for the recovery and assessment of historical data, the development of standard data quality assurance procedures, enhanced linkage among data centers (O<sub>3</sub>, UV, GHG, etc.) to ensure availability for validation and modeling efforts, and archiving of data obtained from regional process studies for improved accessibility.

7. While there has also been progress in capacity building since the 7<sup>th</sup> ORM, much remains to be accomplished. A number of key activities have been undertaken over the last three years that have had significant impact. Examples of some specific activities that could be conducted in the near term were presented. It was further recommended that specific metrics be developed for better assessing the success of capacity building over the next few years.

8. The full report of the 8<sup>th</sup> Meeting of Ozone Research Managers includes summaries of all of the oral presentations and all of the submitted national reports. It is available as “WMO Global Ozone Research and Monitoring Project, Report No. 51”.

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## Annex IX

### Bali Declaration<sup>13</sup>

#### **Bali Declaration on Transitioning to Low Global Warming Potential Alternatives to Ozone Depleting Substances**

We, the Parties to the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer, having met in Bali, Indonesia from 21 to 25 November 2011,

*Cognizant* that certain ozone depleting substances have high global warming potential and that the mitigation of ozone depleting substances could contribute to the reduction of greenhouse gas emissions,

*Recalling* the general obligation under Article 2 of the Vienna Convention that Parties take appropriate measures in accordance with the provisions of that Convention and of its protocol to which they are party to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer,

*Also recalling* decision XIX/6, in which the Meeting of the Parties decided to encourage parties to promote the selection of alternatives to ozone depleting substances that minimize environmental impacts,

*Mindful* that certain high global warming potential alternatives to ozone depleting substances are contributing to environmental degradation,

*Reaffirming* the need for a transition to alternatives which are technically proven, economically viable, and environmentally benign to ozone depleting substances,

*Recalling* the declaration signed by 90 Parties at the 22<sup>nd</sup> Meeting of the Parties to the Montreal Protocol in Bangkok 2010,

*Emphasizing* the importance of capacity building, financial, technical and other assistance needed by Parties operating under paragraph 1 of Article 5 of the Montreal Protocol for transitioning to low global warming potential alternatives,

*Acknowledging* the decision of the Parties at the 23<sup>rd</sup> Meeting of the Parties to the Montreal Protocol in Bali concerning additional information on alternatives to ozone depleting substances,

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<sup>13</sup> The Bali Declaration is presented here as submitted by its drafters, without formal editing.

*Hereby:*

1. *Note with appreciation* the efforts of the Parties operating under Paragraph 1 Article 5, which selected low global warming potential alternatives for implementing their HCFCs Phase-out Management Plans for compliance with the 2013 and 2015 control targets;
2. *Call on* Parties to conduct further studies on low global warming potential alternatives to ozone depleting substances, that include, but are not limited to, the economic impact and its feasibility, technical feasibility, market availability and impact on human health and safety of such alternatives in particular with enhanced engagement of stakeholders, particularly the industry;
3. *Invite* Parties and others in a position to do so, to provide suitable and sustainable financial as well as technical assistance, including technology transfer and capacity building needed by Parties, in particular Parties operating under paragraph 1 of Article 5 for transitioning to low global warming potential alternatives to ozone depleting substances that minimize environmental impacts;
4. *Call on* parties and the Ozone Secretariat to continue coordination between the Vienna Convention and its Montreal Protocol and the United Nations Framework Convention on Climate Change and its Kyoto Protocol to ensure their mutually supportive implementation and the achievement of their objectives;
5. *Call on* Parties, while recognizing national priorities, to explore further and pursue under the Montreal Protocol the most effective means of achieving the transition to low global warming potential alternatives to ozone depleting substances.



## Annex X

### Summaries of presentations by members of the assessment panels on the 2010 quadrennial assessment<sup>14</sup> during the high-level segment

#### I. Environmental Effects Assessment Panel

1. The Environmental Effects Assessment Panel (EEAP) Co-Chair gave an overview of the key findings of the 2010 EEAP report, stating that the success of the Montreal Protocol has prevented large-scale environmental impacts of ozone depletion, such as increases in UV radiation and consequent damage to human health and ecosystems. Increases in sun-burning (erythema) UV-B radiation due to ozone depletion have been small outside regions affected by the Antarctic ozone hole. As a result of the Montreal Protocol, major increases in skin cancer rates that would have occurred with uncontrolled ozone depletion have been prevented. Large reductions in the growth and productivity of plants and aquatic organisms, and hence significant changes to the global carbon cycle, also have been avoided. In the future, environmental effects on human health, biota, and materials will be compounded by new combinations of environmental factors resulting from the interaction of increasing atmospheric CO<sub>2</sub>, climate change, and UV radiation.

2. The EEAP Co-Chair then summarised the key consequences of ozone depletion, UV radiation and climate change interactions for human health, terrestrial and aquatic ecosystems, biogeochemical cycles, air quality and construction materials. It was noted that effects of UV-B radiation on human health include increased cataract and melanoma of the eye, decreased immunity for certain diseases, and increased skin cancer incidence. Interactions of climate variables, such as temperature, can exacerbate UV radiation effects on health. There is a need for further information to the public for following a balanced lifestyle to allow for sufficient Vitamin D production from UV-B radiation, which is important for maintaining bone structure and preventing certain diseases. Rising temperature, rainfall, extreme droughts and increasing carbon dioxide levels together with UV radiation result in complex responses and feedbacks for terrestrial ecosystems, raising concerns of significant implications for food security and food quality. The role of oceans as a sink for the rising carbon dioxide levels has contributed to the acidification of the water with negative effects for skeletal formation in calcified organisms, which increases their vulnerability to UV radiation. Nutrient cycling through terrestrial and aquatic ecosystems and the loss of carbon dioxide to the atmosphere are accelerated by UV radiation and climate change. The cleansing effect of hydroxyl radicals, produced in the atmosphere by solar UV radiation, will decrease with the expected recovery of stratospheric ozone. Such a decline in this cleansing effect would increase photochemical smog at low and middle latitudes, with negative implications for human health and the environment. Current research indicates that low concentrations of the breakdown products of HCFCs and HFCs (e.g., trifluoroacetic acid) currently do not constitute a significant risk to human health or the environment. However, this should be continuously assessed as the production of the substitutes increase. The effects of climate change and UV radiation on construction materials such as plastics and wood indicate increased damage by UV radiation in combination with high temperatures, humidity and atmospheric pollutants. Some of these effects can be offset by protective stabilisers and wood-plastic composites.

#### II. Scientific Assessment Panel

3. The Scientific Assessment Panel (SAP) Co-Chairs spoke on the science findings from the 2011 Synthesis Report and the Scientific Assessment of Ozone Depletion: 2010. The SAP Co-Chair noted that the Synthesis Report shows that the Montreal Protocol is working to protect the ozone layer, and that furthermore this finding has strengthened since the 2006 assessments. The total abundance of ozone depleting substances (ODSs) in the atmosphere continues to decline, even though atmospheric levels of ODS replacements such as hydrochlorofluorocarbons (HCFCs) are increasing as chlorofluorocarbons (CFCs) have been phased out. Ozone column amounts have neither increased nor decreased in the last decade, a finding that is consistent with both the small ODS changes during this period and the current understanding of the atmosphere.

4. The SAP Co-Chair summarized the overarching findings of the Synthesis Report on three topics. (1) *Ozone layer and climate*: the Synthesis Report finds that these two issues are intricately connected. Ozone as well as ODSs impact climate, and in turn, both are impacted by climate. Hence, it may be prudent to consider ozone layer and climate protection together when deciding upon control

<sup>14</sup> The summaries in the present annex appear as submitted by the presenters, without formal editing.

mechanisms for anthropogenic chemical emissions. The magnitude of the consequences of climate-ozone interactions for health, biodiversity, ecosystem function and feedbacks are currently uncertain. It is technically and economically feasible to accelerate the phase-out of ODSs that are greenhouse gases (GHGs), to phase down the use of high global warming potential (GWP) hydrofluorocarbons (HFCs), and to leapfrog the use of high-GWP HFCs as alternatives for most HCFC applications. (2) *Hydrofluorocarbons*: HFCs have essentially zero ozone depletion potentials (ODPs) but high GWPs; the Synthesis Report finds that alternatives with lower GWPs are emerging. If unabated, the current HFC levels could, by the year 2050, grow to become 20% of all GWP-weighted GHG emissions. Breakdown products from HFC and HCFC uses, such as trifluoroacetic acid (TFA), are not expected to be a significant risk to health or the environment. (3) *Methyl bromide*: the Synthesis Report finds that further control of methyl bromide is still possible. For example, approximately 20–35% of present global consumption of methyl bromide for quarantine and pre-shipment (QPS) uses could be replaced with available alternatives.

5. The SAP Co-Chair then summarized major findings of the 2010 SAP report, noting that (1) atmospheric abundances of ODSs are behaving as expected; (2) the coupling of climate and the ozone layer means that Montreal Protocol decisions can impact (and indeed already have impacted) both issues, and that climate change will become increasingly more important to the future ozone layer as ODSs decline; (3) the ozone hole continues to occur as expected and will persist until after midcentury; (4) global ozone depletion is much smaller than the ozone-hole depletion and will persist until about midcentury; and (5) changes in surface ultraviolet radiation have been small to date, and in the future will be more influenced by climate change than by ozone depletion.

6. The SAP co-chairs also noted that ozone depletion had been quite severe in both the Arctic and Antarctic in 2011. These depletions were noted to be consistent with our current understanding of polar ozone loss processes and the slow decline of ODSs in the polar stratosphere.

### III. Technology and Economic Assessment Panel

7. Mr. Ian Rae, Co-chair of the Chemicals Technical Options Committee started the presentation on the Technology and Economic Assessment Panel (TEAP) 2010 Assessment Report. He mentioned the six Technical Options Committees (TOCs) under the TEAP, i.e., the Chemicals TOC, the Foams TOC, the Halons TOC, the Medical TOC, the Methyl Bromide TOC and the Refrigeration, AC and Heat Pumps TOC. He said that each TOC reports annually on the progress in phasing out sector production and consumption, and on the impact on emissions of ozone depleting substances, that TEAP and its TOCs respond to specific requests from the Parties, that the TEAP establishes Task Forces to deal with special requests and that the TEAP is involved in reviewing and making recommendations on essential or critical use nominations. The TOCs have 1 or 2 meetings per year and TEAP has one one-week long meeting per year and also meets in the margins of the annual Open Ended Working Group and the Meeting of the Parties. He said that each TOC has a membership of 17 to 28 experts, except the MBTOC, which has 38 members. The TEAP has 20 members that are either co-chairs, TOC co-chairs or Senior Expert Members. In total, the TEAP and TOCs have 145 expert members, of which 88 are from non-Article 5 and 57 are from Article 5 Parties.

8. Mr. Ian Rae then continued the presentation on items related to the Chemicals Technical Options Committee in the 2010 TEAP Assessment Report. He mentioned that, during 2007-2010, 17 process agent uses were added to Table A, which contained the list of approved process agent uses, and 12 uses were deleted from the list as they were changed or abandoned. He suggested that Parties may wish to consider developing an improved standard method of reporting process agent emissions that were currently listed in Table B of the process agent decisions. He also said that analytical uses of ozone depleting substances, especially carbon tetrachloride are declining slowly as alternative methods are adopted. He noted that in-kind and not-in-kind alternatives have replaced 90% of solvent uses of ozone depleting substances, and that remaining ozone depleting substance solvent uses are now mainly found in parties operating under Article 5. Mr. Rae stated that a comprehensive review on carbon tetrachloride emissions was made but that there remains a significant discrepancy between the reported emissions and the observed atmospheric concentrations. He also stated that, during 2007 to 2010, little change had occurred in destruction technologies except for the cement-kiln use in one Article 5 Party. In terms of the way forward, Mr. Rae mentioned that it would be helpful to work with national and international standards bodies to establish new standard methods of analysis that do not use ozone depleting substances and that the reporting of ozone depleting substance volumes used for feedstock uses by Parties through the Ozone Secretariat may enable a more complete quantification of feedstock uses. He concluded by saying that a hurdle to overcome in the complete phase-out of ozone depleting substance solvents in Article 5 Parties will be the economic impact on small and medium size users who make up a major portion of the remaining solvent market. He also suggested that further studies

will be needed to improve and reconcile bottom-up and top-down calculations of the carbon tetrachloride emissions, to search for unreported emission sources and to critically analyse UNEP inventory data and to possibly revise the atmospheric lifetime of carbon tetrachloride.

9. Mr. Miguel Quintero, co-chair Foams TOC (FTOC), then continued the presentation on items related to the foams in the 2010 TEAP Assessment Report. He mentioned that the HCFC phase-out is complete in all non-Article 5 Parties, with the XPS industry in North America being among the last to make the transition. He also said that hydrocarbons are currently the primary substitute, but there is pressure to further optimise this option by blending and that unsaturated HCFCs and HFCs (HFOs) are showing better thermal performance than saturated HFCs in continuing evaluations. However, substantial further validation in both performance and cost is required to support emerging commercialisation plans in the 2013 to 2015 timeframe. He stressed that concerns persist over the availability of low-GWP replacements for HCFCs in Article 5 Parties and that current options (pre-blended hydrocarbons, water blown, methyl formate, etc.) may not provide adequate solutions for small and medium sized enterprises. The recovery of ozone depleting substances from appliance foams continues to be practised but cost effectiveness in carbon equivalents will decrease as the product mix shifts to HCFC-containing foams. Further analysis of ozone depleting substance banks confirms that flows of ozone depleting substance-based foams from buildings will be modest for the next decade to come. As the way forward Mr. Quintero said that, for the transition in Article 5 Parties, there continues to be a need to characterise the performance of foams made from low-GWP alternatives, especially for rigid foam applications. Pilot projects for methyl formate, methylal, pre-blended hydrocarbons and supercritical CO<sub>2</sub> funded by the Multilateral Fund were noted as being especially important. In non-Article 5 countries, the interest is in further improving energy efficiency. Additional pressure may arise if proposals to phase-down the use of saturated HFCs are adopted. Such measures may serve to strengthen research towards low-GWP solutions, in particular, towards the intelligent use of blends. Mr. Quintero said that further investigations are required to determine the most appropriate strategies for bank management in foams, in particular CFC management first, taking into account baseline release rates and other technical and economic factors. Furthermore, efficient ways of transferring existing destruction technologies from non-Article 5 to Article 5 Parties are needed.

10. Mr. Sergey Kopylov, co-chair Halon TOC, then continued the presentation on items related to the Halons in the 2010 TEAP Assessment Report. He mentioned estimates for the 2010 global bank of halons, and said that the use of Halon 2402 as a process agent by the Russian chemical industry has reducing the bank of this halon. He also said that there has been a lag in the establishment of banking and management programmes in Article 5 Parties and that the International Civil Aviation Organisation had adopted a revised resolution that amended the halon replacement dates to those recommended by the HTOC and industry. As regards the way forward Mr. Kopylov mentioned that, with no global production authorised for fire protection, the management of existing stocks is crucial to ensure halon availability for applications that need them and that Parties may wish to encourage national or regional banking schemes to maintain good records that minimise uncertainty in stored inventory. He stated that the destruction of halons for carbon credits may not provide the anticipated climate benefits. Mr. Kopylov said that, while there is no apparent shortage of recycled Halon 2402 on a global basis, there are regional shortages that Parties may wish to address. He noted that, despite the introduction of new halon alternatives and their adoption, there will be an ongoing need for halons, where the only halon alternative in a few applications will remain a high GWP HFC. He said that, given the 25-30 year life of civil aircraft, aviation dependency on halons will continue well beyond the time when recycled halons are readily available and that the cost to re-engineer some legacy halon systems can be expensive and, in many cases, industry will continue to rely on halons until retrofit will be mandated.

11. Ms. Marta Pizano, co-chair MBTOC, then continued the presentation on items related to Methyl Bromide in the 2010 TEAP Assessment Report. She mentioned that, in 2008, methyl bromide use was higher for quarantine and pre-shipment (QPS0 applications than for controlled uses for the first time, whereas, in 2010, QPS consumption was 51% higher. She noted that the increased use of methyl bromide for QPS is offsetting the gains made by reductions in controlled uses. She noted that while there is no obligation or incentive under the Protocol to limit QPS uses or emissions, some Parties had nonetheless phased out methyl bromide for QPS, and others are committed to a phase-out in the near future. She stressed that 20-35% of present global QPS use can be replaced with alternatives available today and that Parties may wish to give increased consideration to adoption of alternatives for the major QPS uses (timber, WPM, grain, logs). In her closing remarks she mentioned that improved knowledge on remaining methyl bromide uses for QPS will help guide a successful phase-out.

12. Mr. Lambert Kuijpers, co-chair of the refrigeration TOC, then continued the presentation on items related to Refrigeration, AC and Heat Pumps in the 2010 TEAP Assessment Report. He mentioned that more than 60 new refrigerants, many of them blends, have been introduced for use since the 2006 Assessment Report. He then gave a very brief overview of specific issues from the different subsectors. In domestic refrigeration more than one-third of newly produced units globally use HC-600a; the balance use HFC-134a. In commercial refrigeration hydrocarbons (HCs) and R-744 (CO<sub>2</sub>) are gaining market share for stand-alone equipment in Europe and in Japan. HCFC-22 represents about 60% of the global commercial refrigerant bank. In non-Article 5 Parties, the replacement of HCFC-22 in supermarkets is dominated by R-404A and R-507A, with an increasing use of R-744. In industrial refrigeration, R-717 (ammonia) and HCFC-22 are the most common refrigerants. R-744 is gaining in low-temperature cascade systems where it primarily replaces R-717.

13. He said that in transport refrigeration virtually all new systems utilise HFC refrigerants (such as R-404A and HFC-134a). In air-to-air conditioners and heat pumps, R-410A, and to a limited degree R-407C, are still the major near-term replacements for HCFC-22. HFC-32 has been selected in some recent Multilateral Fund projects. Propane (HC-290) is being used in low charge split systems, window and portable air conditioners. In water-heating heat pumps, HCFC-22 is currently used in Article 5 Parties, while HFC blends are used elsewhere. R-744 based heat pumps have shown steady growth. In chillers, HFC-134a and R-410A are the most common options in smaller systems. The use of HCs and R-717 only forms a small fraction. Mr. Kuijpers noted that, in vehicle air conditioning, several HFC-134a replacement options for new cars (and light trucks) have been evaluated including R-744, HFC-152a and HFC-1234yf. The first vehicles using HFC-1234yf will be introduced in 2012.

14. Mr. Kuijpers noted that many of the lower GWP refrigerants are flammable, which increases the need to reduce refrigerant charge and to implement risk-mitigation technologies. He also flagged that there is a new emphasis on optimising system efficiency and reducing emissions of high-GWP refrigerants. He said that manufacturing of refrigeration, air-conditioning, and heat pump equipment by Article 5 Parties for export is expected to increase further. He said that in domestic refrigeration, and to a lesser extent in commercial stand-alone equipment, the trend will be a transition from HFC-134a to HC-600a. For two-temperature supermarket systems, R-744 is an option for the lower temperature level. In the near future, he said, the choices for the medium-temperature level will include new low GWP HFCs, R-744 and HCs. In air-to-air air conditioning and heat pumps, lower-GWP HFCs, HFC blends and HC-290 are the most likely near-term refrigerants to replace HCFC-22, while in future vehicle air conditioning, the front running candidate among global car manufacturers is HFC-1234yf. He concluded by saying that, in contrast to non-Article 5 Parties, the demand for service refrigerants in most Article 5 Parties will consist of HCFC-22 and HFC-based service blends.

15. Ms. Helen Tope, co-chair Medical TOC, then continued the presentation on items related to the Medical Technical Options in the 2010 Assessment Report. She said that technically satisfactory alternatives to CFC metered dose inhalers (MDIs) are available in almost all countries, for all key drug classes, for asthma/COPD and that most countries are expected to complete transition by about end of 2012, except China, which plans to phase out in 2016. She also noted that, with China supplying Russia's and its own CFCs, the rest of the world could complete the CFC MDI phase-out with careful management of existing CFC stockpiles. Technically and economically feasible alternatives are available for medical aerosol products other than MDIs, however, small use of CFCs remains in developing countries, presumably from stockpiles. Ms. Tope said that commercially available alternatives are replacing the use of CFCs and HCFCs in sterilisation and that an orderly phase-out of HCFCs in sterilisation is readily achievable to meet Montreal Protocol HCFC phase-out schedules.

16. Ms. Tope then continued the presentation by giving some key messages from the 2010 report. She said that the Montreal Protocol is working, with progress in every sector and many ozone depleting substance applications had phased out world-wide. Furthermore that it is technically and economically feasible to accelerate the phase-out of most ozone depleting substances, to reduce emissions in many applications, to collect and destroy surplus ozone depleting substances, and to phase down the use of high GWP HFCs in mobile air conditioning where ozone depleting substances have already been phased out. She mentioned that some metered-dose inhalers and laboratory and analytical uses still depend on new production of ozone depleting substances under essential use exemptions and that some fire protection applications depend on banked halons. She also mentioned that refrigeration and air conditioning servicing depends on banked CFCs, and banked and newly produced HCFCs and that some minor uses depend on a variety of ozone depleting substances.

17. Ms. Tope noted that there is no obligation or incentive under the Montreal Protocol to limit methyl bromide quarantine and pre-shipment uses or emissions. Nevertheless, she said, some Parties have entirely phased out QPS uses of methyl bromide and others are committed to phase-out in the near future. She stressed that the adoption of technologies in Article 5 countries for remaining soil and

commodity uses before 2015 will help guide successful phase-out of remaining uses. Ms. Tope stated that technology is available for Article 5 Parties to “leapfrog” HFCs in some applications, which would avoid a second transition out of HFCs and complications of an inventory of HFC equipment requiring servicing. She stressed that the same technology is available for non-Article 5 Parties to make the transition away from high-GWP HFCs in a new transition. On destruction, she said that the opportunity to destroy unwanted ozone depleting substances used as refrigerants is leaking away as equipment reaches end-of-life and those substances are discharged and that the co-benefits of ozone and climate protection from collecting and destroying those substances likely exceed the costs. It would not be profitable without payment for the environmental benefit itself, but it would be more profitable if enterprises were paid for the contribution to climate and ozone protection. Ms. Tope concluded the TEAP presentation by saying that economic incentives and infrastructure are not available in most Article 5 and non-Article 5 countries, and that it is counter-productive to compel collection and destruction without incentives, because owners may discharge ozone depleting substances that would otherwise be available for paid destruction.

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